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National

Wool Grower

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Number 4



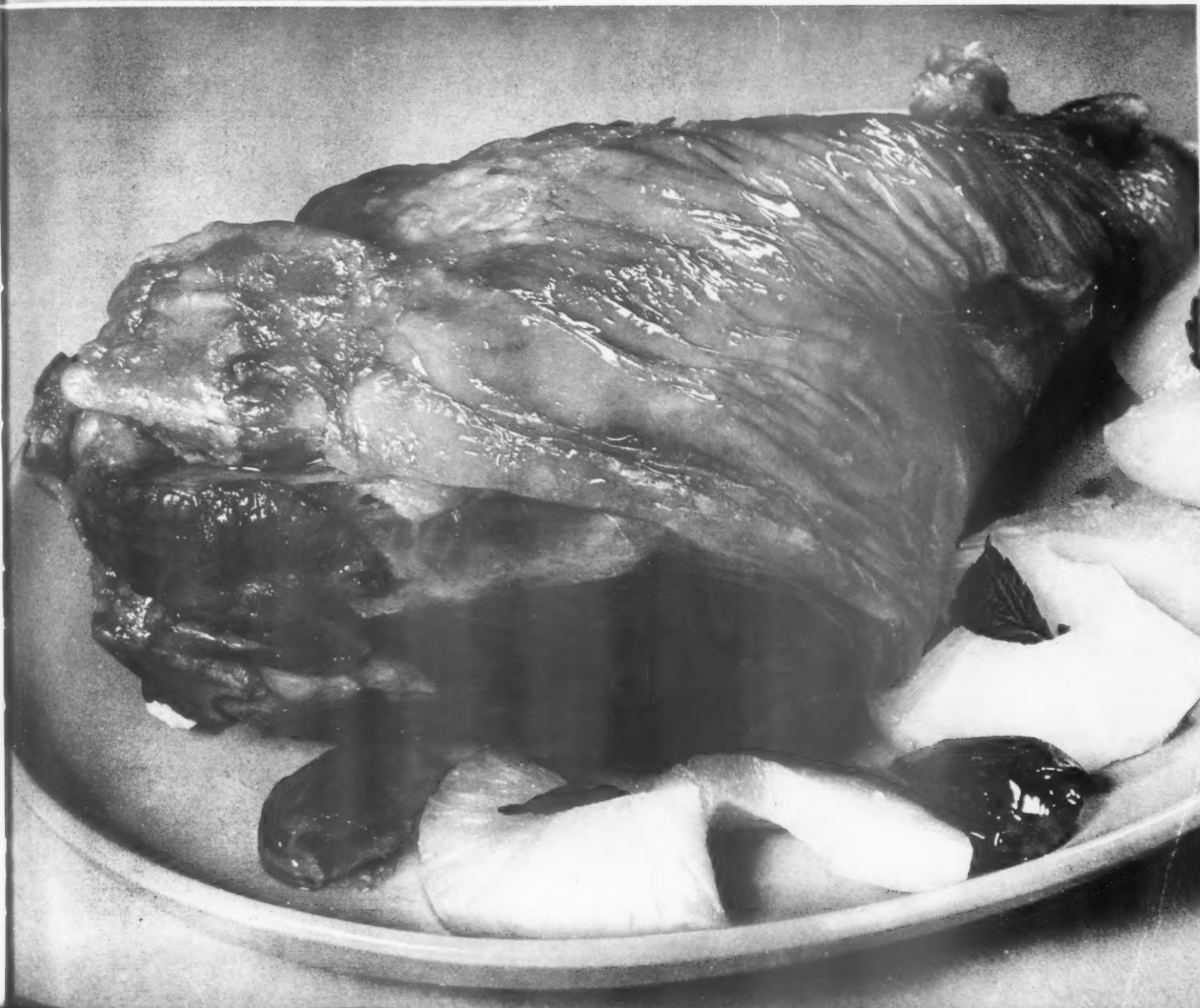
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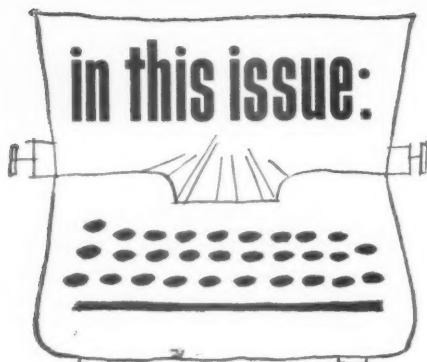
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Treat-

Lamb's Your Meat





RESEARCH HOLDS THE KEY TO WOOL'S FUTURE:

What is being done in the laboratory to make the wool fiber more desirable? Why does wool—nature's living fiber—need improving? These are questions which will be answered for you by Dr. Harold P. Lundgren's vitally informative report in this issue. "What we must have now," Dr. Lundgren asserts, "is a pilot processing plant where we can bridge the gap from the laboratory to direct mill application."

HYBRIDS ARE MORE VIGOROUS:

One of the most detailed reports we have seen on the important question of crossbreeding is given in this issue by G. M. Spurlock of the University of California at Davis. Mr. Spurlock accompanies his report with easy-to-follow charts and with production figures that bear out his contention that hybrid sheep are more prolific producers of lamb and wool.

YOUR STATE PRESIDENTS REPORT:

It doesn't often happen, but this month we have interesting reports from seven of your State Wool Growers Association presidents. All of them are informative and will give you an idea of what is going on elsewhere in the sheep country.

A REPORT FROM WASHINGTON, D. C.:

During most of March NWGA Executive Secretary Edwin E. Marsh was in the Nation's Capital looking into various legislative matters and attending meetings that affect your sheep industry. He makes a complete report in this issue.

INCREASING THE LAMB CROP:

Speaking before the Utah Feed Manufacturers Association, Russell R. Keetch of Utah State University (formerly the Utah State Agricultural College), Logan, Utah, stated that "range sheep need daily attention, especially during the periods of breeding, lambing and wintering." His entire speech is given.

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LAMB'S	
your	
meat	
lamb's	lamb's
YOUR	meat
meat	your
for a year-round treat	
LAMB'S YOUR MEAT	

LAMB PROMOTION EFFORTS:

That delicious, nutritious meat which you produce (see cover)—LAMB—is receiving promotion efforts from various sources. Much of this issue has been devoted to reporting these efforts and their success. Reports from various American Sheep Producers Council departments are carried, as is a report of the recent ASPC meeting in Denver. Then, too, you can read what the National Women's Auxiliary is doing and you'll see a delicious lamb dish. . . . All this and more in this issue.

Shepherd Sam



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CHILSON NAMED UNDER SECRETARY

Hatfield Chilson, whose appointment as Assistant Secretary of the Interior for public land management was announced in the March issue of the NATIONAL WOOL GROWER, has now been elevated to the post of Under Secretary of the Interior with Senate approval. As assistant secretary he was in charge of the Bureau of Land Management, National Park Service, Indian Bureau and Office of Territories. Now he will have added to those duties jurisdiction over water, power, mines and mining, and fish and wildlife problems of the Interior Department.

C. J. "CHET" OLSEN RETIRES

After 37 years with the U. S. Forest Service, Chester J. Olsen retired on April 1. At the time of his retirement, Mr. Olsen was regional forester in charge of the Intermountain Region, with headquarters at Ogden, Utah.

Floyd Iverson of Ogden succeeds Mr. Olsen. Mr. Iverson has been in charge of the Intermountain Region's range and wildlife division since 1955.

William D. Hurst, with the Forest Service in Washington, D. C. since 1955, now fills the position formerly held by Mr. Iverson.

Upon his retirement, Mr. Olsen was named "outstanding Federal employee of 1956." Before arriving at his top position, which made him responsible for the administration of 19 national forests in Utah, Nevada, southern Idaho and western Wyoming, Mr. Olsen served with distinction in every step of the Forest Service career ladder.

CROP PLANTING WILL BE SMALL

Farmers plan to plant the smallest acreage in major crops since 1917, the Agriculture Department has reported. Unless productivity soars, the sharp cut-back should slash crop surpluses

and boost prices, officials said. Farmers intend to plant about 334 million acres to 59 important crops this year—3.5 percent below the 1956 level. The decrease was ascribed chiefly to acreage retired under the soil bank program.

INCOME TAX RELIEF FOR AGRICULTURE

The President's drought relief program, it is reported, contains a proposal that farmers be allowed to average their income over a five-year period and to be taxed on the basis of this average.

This is something the livestock men have been seeking for many years. Economists familiar with livestock operations have realized for some time past that the only way income can be figured fairly is over a period of years; some economists have said 10 years.

The National Wool Growers Association went on record at its recent convention in favor of working for extension of the loss carry-over provision and figuring income over a period of years. It is current opinion that there is some chance of securing the loss carry-over adjustment, and that averaging income over a period of years may come later.

SAFFLOWER TO GROW IN UTAH, IDAHO

Safflower, a thistle with a woody stem, produces seed which contains 33 to 35 percent oil. This plant will be grown this summer on an experimental basis by 50 Utah and Idaho farmers on 1,000 acres of dry farm land.

Utah State University Professor D. W. Pittman, who has conducted research on the plant, says that it yielded up to 1,600 pounds of seed per acre on experimental plots a year ago.

Pacific Vegetable Oil Company, San Francisco, plans to sign for seed this year at \$70 a ton, cleaned basis, at Utah and southern Idaho elevators. After being processed into safflower seed cake, it will be returned for sale in the Intermountain area as livestock feed.

JEANNE STOTHERS NAMED TO BUREAU

Jeanne Stothers has joined the Wool Bureau publicity staff as assistant to Mary North, director for the Bureau of the "Make It Yourself with Wool" contest. Miss Stothers' duties will include work with sponsors and regional directors of the contest.

A graduate of the University of California at Los Angeles with a degree in apparel design, Miss Stothers is a

(Continued on page 5.)



Both cattle and sheep prefer to graze on areas where most of the big sagebrush has been killed, three-year studies on sagebrush ranges near Lander, Wyoming by the U. S. Forest Service indicate.

Utilization of all grasses was light on unsprayed check areas and was progressively heavier as more sagebrush was killed.

While the method of summer fallowing makes little difference as far as costs and yields are concerned, it does make a difference in the amount of protection provided against wind erosion, recent field experiments by Montana State College point out.

Three fields with very similar soil were summer fallowed by these three different methods: A moldboard plow followed by a rod weeder; a one-way followed by a rod weeder; and by subsurface sweeps only. Later examination showed: 70 percent of the soil on the plowed field was fine enough to blow and less than 100 pounds of straw per acre were left on the surface; about half of the soil was fine enough to blow where the one-way plow was used and some 400 pounds of straw were left on the surface; and on the subsurface-tilled field, only about a third of the soil was fine enough to blow and approximately 1,200 pounds of straw per acre were left on the surface.

Lambs fed pelleted ear corn did not gain as well as those receiving shelled corn in feeding trials conducted by the University of Minnesota in 1956. The tests showed that gains for lambs on pelleted ear corn were about the same as for those fed ground ear corn. More specifically, the daily average gain of lambs getting the pelleted corn was .225 pound, compared with .257 for lambs fed ground ear corn and .301 pound for those getting shelled corn. In these feeding trials, the lambs were fed 91 days.

Myxomatosis, the rabbit-killing disease introduced in Australia, is apparently losing its effectiveness. Many strains of rabbits are becoming resistant to this disease. Agricultural officials in Australia have now decided that

no further liberation of the European strain of myxomatosis should be made.

Support is now being given for the introduction of the European rabbit flea into Australia. Fleas were scheduled to be collected in Europe in March, the time of year they are most plentiful. They are to be bred under strict quarantine conditions in Canberra, where tests will be carried out to make sure the flea will not be harmful to Australian native animals.

WOOL INFORMATION

Estimated Average Price 42.7¢

GROWERS received an estimated average price of 42.7 cents per pound on shorn wool from April 1, 1956 through January 31, 1957, the U. S. Department of Agriculture reports.

Full recognition must be given to the fact that the 42.7 cents is an estimated price and it only covers the April through January period. Last year the USDA estimated the average price for a similar period at 44 cents per pound and the incentive payments for the year were made on a 42.8-cent average. The average price for the full marketing year ending March 31, 1957 will not be announced probably until June.

'56 Production Figures Revised

THE USDA has revised its wool production figures for 1956. They now give the U. S. production as 232,126,000 pounds of shorn wool compared with the August, 1956 estimate of 231,754,000. This increase seems to be largely in the western area as the total shorn wool production for the 13 Western States, including Texas and South Dakota, is now given as 163,262,000 pounds instead of the August estimate of 162,534,000.

Pulled wool production amounted to 40 million pounds in 1956, giving a total production of 272 million pounds. This was one percent below 1955 production of 276 million pounds.

The National Wool Grower

EDITOR: IRENE YOUNG
ASSISTANT EDITOR: T. R. CAPENER

April, 1957

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TELEPHONE EMpire 3-4483

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CONTENTS

FEATURED

ASPC Sets \$2 Million Budget.....	10
ASPC Consumer Service Pushes Lamb	13
Research Holds the Keys to Wool's Future	15
Planned Crossbreeding for the Commercial Sheepman	21
Sheep Disease Information— Bluetongue	27
Livestock Nutritional News.....	30
Range Management to Increase the Lamb Crop.....	32

LEGISLATIVE MATTERS

Secretary Marsh Reports.....	7
Drought Hearings Statements.....	8
Conservationists Approve Wilderness Preservation.....	9
Wilderness Areas Opposed.....	12
NWGA Meetings.....	26

WOOL

Incentive Application Deadline Is April 30.....	9
March Wool Market.....	34

LAMB

March Lamb Market.....	36
Lamb Dish of the Month.....	41

MISCELLANEOUS

U. S. Government Owns 48.6 Percent of Western Lands.....	14
Survey Shows American Women Prefer Wool.....	14
"The Livestock and Meat Situation".....	37
Texas Livestock Show Results.....	45
Sheep Coats Tested.....	45

REGULAR DEPARTMENTS

In This Issue.....	2nd Cover
Cutting Chute	2
Research News.....	3
From State Presidents.....	24
Sheepmen's Calendar.....	28
The Auxiliaries.....	38
This Month's Quiz.....	43
Around the Range Country.....	46

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CUTTING CHUTE

(Continued from page 3.)

clothing designer and sewing expert. Before joining the Bureau she was a student at the American Institute for Foreign Trade in Phoenix, Arizona. Previously she was associated with Pacific Scientific Aeroproducts, Glendale, California; Bobrick Manufacturing Corporation, Los Angeles, and E&J Manufacturing Company, Burbank, California.

She is a winner of the Regional Design Award in the Jacques Heim-Harper's Bazaar competition and third place award winner in the national event.

RESEARCH ON MARKETING OF WOOL

A. D. Jones, Tatum, New Mexico, has been appointed cooperative agent in wool marketing for the Agricultural Marketing Service, USDA, and New Mexico A&M College.

Jones will work cooperatively with the agricultural economics and animal husbandry departments and extension wool marketing specialist at the College on research in wool marketing.

The research program is on the marketing of wool through wool warehouses and on the types of wool produced in various areas. Work is presently confined to New Mexico but will soon be extended in the 11 Western States in cooperation with experiment stations in those States.

TOP ELEMENTARY SCHOOLING, BY MAIL

Many ranch families living in remote areas have continuous worries about the schooling of their young children.

A number of ranchers have found it possible to send their children to school without ever leaving home by enrolling them in a unique institution that teaches some 8,000 children all over the world by mail. This is the Calvert School of Baltimore, a non-profit, unendowed school with some study courses from kindergarten through the ninth grade.

Each Calvert course is completely self-contained, with all the necessary textbooks and work materials as well as a daily teaching guide for use by the mother or other home instructor. A member of the Calvert faculty reads and grades lessons upon completion, and then sends them back with a friendly but thorough critique to the student.

Lessons are convenient, since they can be postponed when work on the

ranch is heavy, and then made up again when the work pace slackens off. Calvert courses are approved and accredited by Maryland's Department of Education, and Calvert credits are accepted throughout the country.

FOOT AND MOUTH DISEASE IN FRANCE

The number of farms infected with foot-and-mouth disease in France had risen from 292 in April to 3,386 in December 1956, according to the Ministry of Agriculture. Under the French system of protection by which exposed animals are vaccinated and infected areas isolated, the loss from the disease has been about \$4.3 million since 1952. It is estimated that, had the method of "stamping out" the disease by strict destruction of all exposed and infected animals used in the United States been employed, the cost during the period would have been less than \$143,000. However, the Ministry now considers the disease to be too widespread for eradication by a slaughter program.

—Foreign Crops and Markets

Scrapie Found in California

A chronic infectious virus disease of sheep known as scrapie has been diagnosed recently in a flock of purebred sheep near Dixon in Solano County, California, by Federal and State livestock disease authorities.

The infection is believed to have been introduced into the flock by a purebred ram imported from England about three years ago. If unchecked, the ultimate mortality of scrapie may cause severe losses.

Both Federal and State laboratories, on the basis of microscopic studies of brain tissue, reported the disease to be scrapie.

Efforts will be made by Federal and California livestock sanitary officials to locate sheep originating in the Solano County herd which might be found in California and other States.

W. C. Jacobsen, California Director of Agriculture, immediately imposed a State quarantine prohibiting the movement of sheep from the infected area and directing that all sheep infected or exposed to scrapie be destroyed, and that all infected areas be cleaned and disinfected under the direction of State or Federal inspectors before being released from quarantine.

Scrapie disease has not been reported in California since 1955. The first case was reported in 1952.

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She can't buy the lamb *that isn't there!*

How many, many times does the incident pictured above happen at meat cases all over the country! Month after month, lamb just vanishes from the market. And the *market* for lamb vanishes, too.

Now, all of us in the lamb business understand the reasons for this unhappy situation. The fact is that during certain months of the year, lamb shipments to market are extremely limited. This means that the short supplies are shipped to those special areas where consumers are willing to pay premium prices.

But there is a way to keep lamb in the meat cases and on the tables of America at all times!

The answer will be found on your farm or ranch. You can help by adjusting your breeding and feeding schedules so that you will have lambs to sell when market supplies are usually low and price levels are usually favorable to the producer.

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Various Matters Affect Your Industry in Washington, D.C.

by **EDWIN E. MARSH**
Executive Secretary, National Wool
Growers Association

March 25, 1957

I have just returned from Washington where I have been for three weeks past.

Matters that required immediate attention at the Nation's Capital were sheepherder importations and drought legislation.

Sheepherder Importations

A conference between representatives of the National Wool Growers Association, California Range Association and Immigration and Naturalization Service was held on Thursday, March 7, to see if arrangements could be made to carry out recommendations of a Subcommittee of the House Committee on the Judiciary, chaired by Congressman Walter of Pennsylvania. This committee recommended that instead of passing further special legislation to bring in herders, they be brought in under provisions of the Immigration and Nationality Act on a temporary basis, subject to deportation if they leave the sheep industry. At this point the officials of the Immigration and Naturalization Service would not agree to permitting herders to remain more than three years but have promised to take a second look at a later date when we see how this program works out.

A further meeting with the Immigration and Naturalization Service and the California Range Association is scheduled today in Washington to get certain documents approved and to make further arrangements to bring herders into this country as rapidly as possible.

Drought Legislation

The Senate Agriculture Committee held hearings on drought legislation on Monday and Tuesday of last week (March 18 and 19).

Under Secretary of Agriculture True D. Morse was in the witness chair all of the first day, presenting the Department's recommendations for drought assistance.

First, USDA proposes emergency feed grain, hay and roughage programs. This recommendation calls for the States to meet 25 percent of the cost necessary to carry out this program.

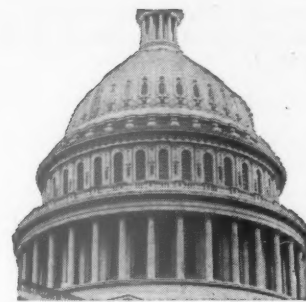
The second recommendation from the Department is for emergency credit to farmers and ranchers. S. 1527 and S. 956 have been introduced to extend the authority of the Secretary of Agriculture to make special livestock loans, with a ten-year repayment period, and to increase the authority to appropriate for direct Title 1 loans from 50 million dollars to 75 million dollars.

Emergency conservation measures, including a deferred grazing program, make up the third recommendation from the Department. The necessary authority to permit increased use of the Agricultural Conservation Program funds for deferred grazing is covered in S. 1526, also recently introduced. A further supplementary appropriation request has been made for 25 million dollars to be used for a deferred grazing program which includes non-use, limited grazing, rotational grazing, and deferred grazing on lands eligible under the A. C. P. but does not apply to federally owned lands.

There are two other bills under consideration by the Senate Committee: H. R. 2367, the Poage bill which has already passed the House and which as you know, provides for payments to stockmen who defer grazing on part or all of their private lands for a period of not less than twelve months, and S. 608, Senator Watkin's bill which provides for payment for deferred grazing on both public and private lands.

Most of those testifying the second day were proponents of deferred grazing programs. Penrose Metcalfe, San Angelo, Texas, testified as a rancher in the drought area and also in behalf of the Texas Sheep & Goat Raisers Association and as a vice president of the National Wool Growers Association. I testified in line with the resolution adopted at our convention in regard to our approval of a deferred grazing program and especially emphasized the need for a safeguarding amendment to protect any grower in the drought area from having a non-use penalty reduction applied to any of his public land permits if he puts any of his private lands into a deferred grazing program. (Parts of NWGA testimony are set up separately.)

It is difficult to determine whether the Committee will report out the Poage



April, 1957

bill, the bills embodying the Department's recommendations, or a combination, but it looks as if we will end up with a deferred grazing program in some form.

Other Washington Matters

Wage and Hour Amendments

Senator Morse has introduced S. 1267 to extend coverage of wage and hour provisions to a number of workers not now covered, including farm workers. We are making arrangements either to appear at the hearing on this measure or to file a statement in the record in opposition.

Regulations for Housing Mexican Labor

The National Wool Growers Association also is joining in the request of a group of Congressmen and the Texas Sheep and Goat Raisers Association for amendments to certain unworkable and highly impractical housing regulations for Mexican labor employed on ranches in this country. We have written the Assistant Secretary of Labor in this connection.

Meat Promotion Deductions

S. 646, which provides for deductions at public markets for meat promotion, is scheduled for hearings by the Senate Agricultural Committee on or about April 2. Under this measure deductions would be made if requested by producer-sponsored organizations approved by the Secretary of Agriculture. Deductions would not exceed 10 cents per head for cattle and calves and 5 cents per head for sheep, lambs and hogs. Also when requested within 30 days by the shipper, a refund will be made.

Wool and Mohair Research

We have been allotted time on April 8 to appear before the House Subcommittee on Agricultural Appropriations and testify in behalf of the appropriations for the wool pilot processing plant and for wool and mohair research at Albany, California.

We have written all of our western Senators and Congressmen and have personally contacted a number of them

in regard to this appropriation. Some of them are most hopeful that it can be retained.

Public Land Withdrawals

H. R. 5338 to require Congressional approval for withdrawals of more than 5,000 acres of public lands for defense purposes has been reported out favorably by the House Interior & Insular Affairs Committee.

Carpet Wools

Elroy Pohle of the Denver Wool Laboratory has been in the East endeavoring to get samples of imported carpet wool for comparison with domestic wools of the same spinning counts. This is in line with our request to the USDA that such a comparison be made in view of the efforts of carpet manufacturers to have the tariff on wools not finer than 46's removed if used for carpet purposes. The House Ways and Means Committee has not yet reported this legislation out. In regard to Congressman Berry's bill to make the tariff applicable on all imported wools, we are informed that two Government departments are making adverse reports on it.

Turkish Barter Deal

Although negotiations for bartering wool to Turkey in exchange for chrome ore have been pending for a considerable period of time, the chances of consummating these trades in the near future are again looking most favorable. In fact, the latest report is that the deal on three million pounds of wool has been completed and that selection of the wools is about to commence. Senator Barrett who has been working very hard to put these barter deals through is also hopeful that the 30-million-pound exchange for chrome ore will go through.

DROUGHT HEARINGS

Metcalfé Statement

ON March 19, 1957, the Senate Agriculture Committee held hearings on drought legislation. In Washington, D. C., to appear before the hearings were Penrose B. Metcalfé, vice president of the National Wool Growers Association from San Angelo, Texas, who also represented the Texas Sheep and Goat Raisers Association and Edwin E. Marsh, executive secretary of the National Wool Growers Association.

Following are extracts from each of these two officials' statements. After giving the committee a brief picture of "the worst drought on record," Vice President Metcalfé went on to say:

"We growers have been giving the situation we face serious thought, trying to size things up frankly in an effort to work out some suggestions for a long-time program, when the rains do start, as well as for the interim. I would respectfully suggest that the following might help:

"1. A workable feed program to see that the rancher who wants to, can maintain his foundation flocks and herds so as to be prepared to restock. We feel that the program set up in 1953, where the rancher was sold surplus grain and protein feeds direct through the ASC, without going through a middleman, worked much better than the method followed since then.

"2. Long-term credit based on backing legitimate operators over a sufficient period of time to permit them to work out of their obligations. Coupled with this should be changes in the income tax laws to permit growers to carry forward their losses further than is now the case; otherwise they will never be able to work out of their debts.

"3. A system of deferred grazing which will permit deferment of adequate amounts of acreage over a period of several years to give time to restore the normal turf on the ground. It will be absolutely impossible to restore the turf in much of our area under several years, even if we do get normal rainfall. During these drought years we have followed the best possible practices of husbandry, we have used our utmost ingenuity and tried all sorts of range pitting, contour furrowing, even deferment of some pastures for short periods of time, all of which practices are good and help some. None of these can bring us back our grass until we get rain over extensive periods of time and not even then unless we give our native grasses a chance to reseed and thereby restore our turf.

"In such a program we feel that deferment of sufficient acreage on any ranch should be provided to get the job done once and for all.

"When the Congress passed the National Wool Act in 1954, its primary objective was to increase the production of wool, recognized by the Act as a strategic commodity. It is our belief that the objective of this Act will be reached sooner if a serious, far-sighted policy is promulgated and followed in the drought area of taking care of the natural fertility of the soil and preserving the foundation flocks and herds for re-stocking our ranches after the drought has been broken, but not until the pastures have recovered sufficiently to justify such action. Once the grass gets a turf well formed it can supply more grass for livestock and keep it

up, thus hastening the day of the achievement of the objective. We feel an intelligent deferred grazing program is the answer.

"In a deferred grazing program we feel that deferment of sufficient acreage on any ranch should be provided to get the job done efficiently and once and for all. On the smaller ranches I feel it would be well to permit the rancher to defer his entire place, if he so desires. As a matter of fact, because we are dealing in this instance with acres and an industry, rather than with individuals, I seriously doubt that any maximum limit should be set on the amount any one operator could defer, within the bounds of common sense and reason. We seek to restore an economy based on land, an economy which is stable, and one that can be subjected to taxes to support the local, state and Federal government."

Marsh Statement

SECRETARY Marsh took the stand next. After a brief introduction he began:

"The National Wool Growers Association has been the spokesman for the sheep industry of the U. S. for the past 92 years. Our members are grass root growers of sheep, lambs and wool and a good many of them live in the vast range areas of the Mountain States and Texas, where 74 percent of our shorn wool is produced."

Secretary Marsh then quoted the resolution adopted at the 92nd annual NWGA convention which voices approval of a deferred grazing program which would give temporary relief to drought disaster areas. "We approve this program, but request that any provision limiting payments to individuals be deleted," the resolution states. "We also request adequate safeguards for grazing privileges on public lands be inserted."

Secretary Marsh told the committee: "It is quite evident from the debate on this bill (H. R. 2367, introduced by Representative Poage of Texas) when it passed the House that its provisions are intended to apply to grazing on private lands only and not on the public grazing lands of the West. In our Western States, stockmen who have permits to graze on public domain lands and National Forest lands during a portion of the year, are granted those permits through recognition of their ownership and substantial investment in commensurate base properties or private lands which also carry their livestock during a portion of the year.

"If, under this legislation, stockmen in drought areas of our Western States

curtail grazing on their private lands, then in most instances they will have to reduce temporarily the number of livestock they graze on the public lands.

"It is highly essential that the resulting reductions in livestock carried on their public lands grazing allotments, be recognized as a temporary non-use or reduced use. In other words, there must be no disqualification to graze the number of livestock which the permits specify, whenever the drought subsidies sufficiently to permit stockmen to graze their normal number of livestock once again.

"Following is suggested language for such a safeguarding amendment, which we deem as a necessary part of deferred grazing legislation:

Any person, persons or corporation who shall place in a deferred grazing program under the provisions of this act his privately owned base lands, which are commensurate or intermingled with federally controlled lands, shall be granted without prejudice a non-use permit, license or lease on lands included under the Taylor Grazing Act, the National Forests or the Bankhead-Jones Act, which he shall deem proper and proportionate. At the expiration of the non-use period the said permit, license or lease shall be reinstated to its full amount. If the owner and permittee shall mutually agree with the administering Federal agency that during the period of non-use the carrying capacity of Federal lands concerned has increased, the permit or license shall be reinstated to include that additional carrying capacity.

"In conclusion, we urge the immediate establishment of a deferred grazing program in our drought-disaster areas, with a safeguarding clause in the legislation to prevent permanent reductions in public lands grazing permits for those participating in the program."

Conservationists Approve Wilderness Preservation

MORE than 400 of the Nation's leading conservationists, meeting in San Francisco for the Fifth Biennial Wilderness Conference, March 15-16, endorsed two major recreational and wilderness bills.

The resolution endorsing the National Outdoor Recreation Resources Review bill adopted by the conference declared:

"It is essential to know before it is too late that wildlife, scenic and other outdoor recreational resources are still available, where they are and what is the type and quality of each and their relation to the preservation of the wilderness.

"It is also essential to estimate how many and what types of each we shall need in 50 or 100 years, and how we may best save those selected for pres-

ervation with high standards of size and quality, in perpetuity.

"If the opportunity remaining to save these outdoor recreational resources is lost now, it will be lost forever. To this end, we recommend in principle the Outdoor Recreation Resources Review bill."

In endorsing the wilderness preservation bills, the Conference said, in a resolution adopted unanimously:

"We believe that large-size wilderness should be protected in perpetuity under true wilderness conditions and that its preservation is essential to the cultural, historic, esthetic, recreational and scientific needs of the country and to the physical well-being of all of its people."

The Conference also, by resolution, advocated that all wilderness, wild, primitive and roadless areas on public lands be withdrawn from mineral entry, that the landing of airplanes in such areas be prohibited and that private holdings in such areas be purchased by the Government. Failure to do this, the Conference declared, will ultimately destroy the wilderness character of the areas.

In a press story covering this meeting, Dr. R. E. McArdle, chief of the United States Forest Service, is reported as saying, "The Forest Service believes that wilderness is a valuable use of national forest resources. We are going to manage the national forests so we can supply the Nation with water, timber, opportunities for mass recreational use, with minerals, with forage and with wilderness. . . . The best way to avoid pressure to open up wilderness areas is to provide an adequate supply of other resources by good multiple land use on non-wilderness areas."

Edward Woozley, director of the Bureau of Land Management, more or less spoke along the same line as Dr. McArdle. "The more we control erosion, grow grass on ranges, raise more timber and husband and make use of minerals in proven districts," Mr. Woozley stated, "the more land there will be that can be added to the already extensive areas devoted to outdoor recreation and wilderness use—some 36 million acres."

In other words, the heads of these Government bureaus handling federally owned lands from which wilderness areas would be carved, were of the opinion that the ultimate areas which can be saved as wilderness will depend largely on the extent to which multiple use of lands outside the wilderness sections can be developed to meet the needs of the people.

The Conference was sponsored by the Sierra Club, in cooperation with the

Wilderness Society, American Planning and Civic Association, Federation of Western Outdoor Clubs, Izaak Walton League of America and the National Parks Association.

Incentive Application Deadline is April 30

APPPLICATIONS for wool incentive payments on sales completed during the 1956 marketing year ended March 31, 1957, must be filed with county ASC offices not later than April 30, 1957.

Payments under the '56 program will be made this summer when the payment rates are determined on the basis of average prices received by producers for shorn wool during the 1956 marketing year. Wool sales made after March 31 will be eligible for 1957 program payments to be made in the summer of 1958.

Under the regulations, wool is not considered marketed until title has passed to the buyer, the wool has been delivered to the buyer either physically or through documents which transfer control to the buyer, and the last of the factors (price per pound, weight, yield, etc.) needed to determine the total purchase price payable by the buyer is available.

U. S. Department of Agriculture officials warn that the sales documents should show the true net sales proceeds including deductions made for freight and other marketing charges. This means that the cost of any marketing operation for the wool must be deducted before determining the net sales proceeds for figuring the wool incentive payment. County ASC offices have authority to adjust proceeds when charges are not shown. Where false information is filed, both the producer and wool buyer are subject to severe penalties, USDA officials warn.

To be eligible for lamb payments under the program, lambs which producers sell must never have been shorn. Unshorn lamb payments are made on a per-hundredweight basis.

Producers in their application for lamb payments must report the number and liveweight of any purchases of unshorn lambs after March 31, 1956, which are included in the sales covered by the application for payment. If any such lambs are later sheared instead of being sold as unshorn lambs, the number and liveweight must be reported on the shorn wool application.

Reporting this information is required to determine the necessary deduction from producers' payments equal to the amount of payment due the prior owner on the liveweight of unshorn lambs sold.



Officers and Directors of the American Sheep Producers Council

ASPC Sets \$2 Million Promotion Budget

THE American Sheep Producers Council will broaden its program of advertising and promotion with a budget of \$1,153,900 for lamb and \$800,000 for wool during the fiscal year beginning July 1.

This decision was made by the directors and delegates meeting in Denver, March 11 and 12. This was the first meeting for the Council under its new form of representation which was expanded to include 137 delegates of which 37 are directors. Previously there were 54 delegates and 16 directors.

Wool will be promoted and advertised on a nationwide scale, while the ASPC will intensify its efforts for lamb in 15 markets throughout the country. The plan for advertising in the market areas is flexible and subject to change as conditions warrant.

The lamb budget includes \$623,900 for advertising in newspapers, radio, television and trade publications; \$299,000 for promotion and merchandising, and \$221,000 for consumer service and product publicity.

For wool, the budget includes \$545,000 for advertising through the Wool Bureau in various national magazines and trade publications. In addition, there is \$25,000 allotted for merchandising of wool; \$85,000 for cooperation with allied industries, such as the National Wool Growers Auxiliary and other organizations, plus \$145,000 in reserve for cooperation in promoting American-made wool fabrics.

The proposed market areas for lamb are Philadelphia, Baltimore, Washington, Chicago, Cleveland, Detroit, Milwaukee, Houston, Denver, Salt Lake City, Los Angeles, San Francisco-Oakland, Sacramento, Portland and Seattle.

Reports by Gale Smith, director of lamb promotion, and Mrs. Evadna Hammersley, director of consumer service, indicate a steady increase in lamb consumption in most of the marketing areas. The Council stresses the use of lesser known cuts of lamb to the consumer, packer and retailer.

Max Schmitt, president of the Wool Bureau, gave an optimistic report on the wool promotion and advertising program. He cited the 12 percent increase in consumption of wool in the United States during the past year.

G. N. (Norm) Winder of Denver was reelected president of the Council, and James H. Lemmon of Lemmon, South Dakota, was reelected vice president. M. E. Noonan of Denver, was elected treasurer, replacing I. H. Jacob of Salt Lake City, and Mrs. Eunice Gray of Denver was reelected as assistant treasurer. J. M. (Casey) Jones was reappointed executive secretary by the board.

President Winder was authorized by the board to select a five-man lamb committee and a five-man wool committee to act in advisory capacity to the officers of the Council.

The directors will meet twice a year, and at any other time upon the written request of any 10 directors.

During the directors' meeting, Gale Smith submitted his resignation as lamb promotion director to the board, effective in the near future. The resignation was accepted "with regrets" by the board, which also commended Smith for the work he has done. His successor has not yet been announced.

A committee was also appointed to select the advertising firm which will handle the lamb program. The contract with Botsford, Constantine & Gardner

was dropped in January but their promotion campaign will run through June 30.

The appointment of Ted M. Gomolak as advertising director of the Council was made known during the meeting. He was formerly advertising manager of Montgomery Ward's retail store in Denver.

The new board of directors includes 36 members for the present, with the Nebraska-Kansas Sheep Council yet to name a director. The directors, and the respective sheep council they represent, include:

Eastern Seaboard—Luther Belden of North Hatfield, Mass.; Southern States—Frank Lebus of Cynthiana, Ky.; Ohio—Farrell M. Shultz of DeGraff; Michigan-Wisconsin—Warren Phillips of Blissfield, Mich.; Illinois-Indiana—William Temple of Serena, Ill.; North Dakota-Minnesota—Tom R. Clark of Hopkins, Minn.; Iowa—Otis Budlong of Waterloo; South Dakota—Matt E. Hafner of Newell; Missouri-Oklahoma-Arkansas—V. B. Vandiver of Leonard, Mo.

Texas—T. A. Kincaid Jr. of Ozona, Walter Pfluger of Eden, R. W. Hodge of Del Rio, Penrose Metcalfe of San Angelo and Jerry Puckett of Ft. Stockton; New Mexico—A. S. MacArthur of Wagon Mound; Colorado—G. N. Winder and M. E. Noonan, both of Denver; Wyoming—Harold Josendal of Casper and Leonard W. Hay of Rock Springs; Montana—Gerald Hughes of Stanford and Dan Fulton of Ismay; Utah—J. R. Broadbent of Salt Lake City; Idaho—John Noh of Kimberly and David Little of Emmett; Oregon-Washington—Russell Brown of Vantage, Wash.; California—Hugh Baber of Chico, Godfrey

Priddy of Dixon and John Bidegaray of Fresno; Arizona-Nevada—Tony Smith of Salt Lake City, Utah.

Among the directors for Class II members are: Don Clyde of Heber City, Utah, for the National Wool Growers Association; James Lemmon for the National Wool marketing Corporation; Clifford Bell of Doland, for the National Grange; Oren Wright of Greenwood, for the National Farmers Union; Roy A. Ward of Portland, for the Pacific Wool Growers; A. E. Adams of Mission, for the National Lamb Feeders; Thomas F. Arnold of Valentine, for the National Livestock Producers Association.

Sheepmen throughout the country support the American Sheep Producers Council by contributing one cent for each pound of wool sold and 5 cents per hundred pounds of lamb sold under the Government's wool incentive payment program. The Council was established in September, 1955. It has been actively promoting lamb and wool since January, 1956, in an effort to increase the demand, thus encouraging increased production of sheep in America.

What Results Has Lamb Promotion Shown?

by GALE D. SMITH

ASPC Director of Lamb Promotion

LET'S take a look at some of the results we have obtained from our program.

Recently a separate questionnaire was sent out to packers and retailers in the promotional cities. One question asked: "Did your lamb business increase during our promotion?" Practically without exception all answering indicated that it had.

For instance, in the Atlantic coast area, packers reported an increase of 43 percent over the same period of the previous year. Retailers indicated increases of from 20 to 123 percent. All areas showed increases. At packer level, the Great Lakes reported increases of 26 percent; Portland, Seattle, 28 percent; and in San Francisco 14½ percent. At retail level: Great Lakes indicated an increase of 32 percent, the Northwest 34½ percent, San Francisco and California 20 percent.

Another question asked of the retailers was: "What percent of your total meat business is lamb?" This varied from as low as 2 percent to as high as 20 percent. The overall average was approximately 7 percent.

One of our efforts, as previously mentioned, is to get the consumer to use all cuts of the carcass. Generally speaking,

retailers indicated that our program had made it much easier to sell all cuts of lamb.

Another interesting report by retailers was to the question: "Did total fresh meat business increase during our promotion?" By far the majority indicated it had. This is most significant with respect to the overall livestock picture. We certainly do not want to be accused of jeopardizing some parts of the livestock industry for the sake of another.

Specific Results

To cite just a few examples of results of feature promotions:

Baltimore—(Independent chain of five large super markets) during second week of October reported, "During this promotion our lamb sales increased over 335 percent."

Paterson, New Jersey—365 stores, second week of October: Their advice—"Best lamb promotion in our history and definitely your attractive promotion pieces aided in the success of the sale."

Chicago—Major national chain through 100 stores during first week of December sold 8,300 carcasses and 2,500 hind saddles. Another national chain with 281 stores in Chicago reported that as of November 9, their lamb sales had increased 37 percent in past eight weeks.

Detroit—A major chain of 93 super markets held a promotion the week of October 29. One store sold 130 complete carcasses plus the equivalent of 80 carcasses in cuts, for a total of 10,000 pounds for the week. (Usual weekly sale was 20 carcasses.) Another store in the chain sold 200 carcasses plus the equivalent of 175 carcasses in cuts, total of 15,000 pounds. (Usual, 40 carcasses.) Sales averaged 6,000 pounds per store, or a total of about 4,500 carcasses for the week.

Cleveland—Major chain of 99 stores reports they had an increase of 100,000 pounds in lamb volume during July, August and September. (First three months after start of our promotion.)

California—Los Angeles. An independent chain of 33 supers during week of January 14 had a feature lamb promotion and sold more than 19,000 legs, plus other cuts.

Another interesting development that has recently come to our attention is the report that a large independent chain of 17 super markets in Kansas City, Missouri, is contemplating a 15-week consecutive lamb feature. This is primarily the result of packer salesmanship. This typifies the cooperation we are getting, not only in the promotion cities but outside as well. This is with no paid advertising on our part.

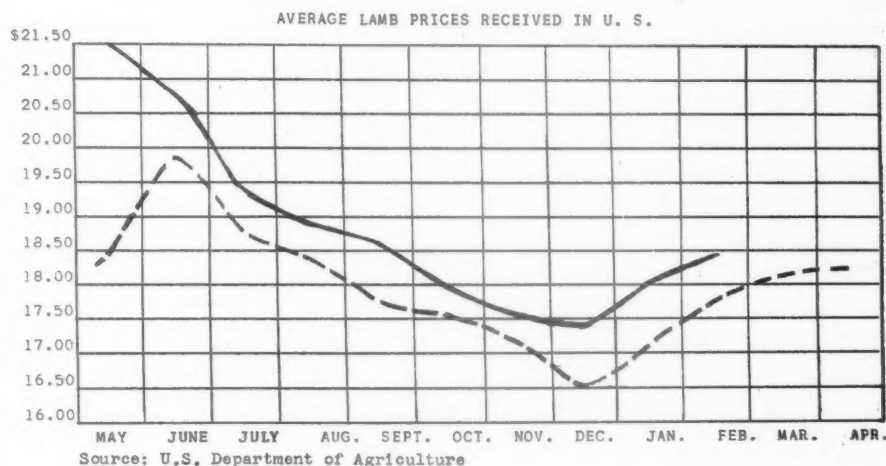
A national packer advised that they sold one retail outlet 6,176 carcasses in September of 1956 as compared to 2,437 in the same month of 1955. In October they sold the same outlet 7,034 as compared to 3,345 in October 1955. For the two months they sold this one retailer 7,428 more carcasses than during the same two months of the previous year. This is an increase of 228 percent.

Another national packer who operates all over the country said, "We sold more lamb per capita in Chicago than anywhere else in 1956, and a lot of the credit must be given to the ASPC program."

A major packer in the Pacific Northwest advised lamb volume in Seattle for the 13 weeks, November through January, showed a 51 percent increase over the previous year. They attribute over 30 percent of this increase to our program.

When such exceptional increases are mentioned in various parts of the country, you naturally wonder where the lambs are coming from, as there is no

ASPC Chart Indicates Lamb Prices Turn Upward





ASPC Photo

TV Comedian George Gobel shows interest in a platter of prettily garnished lamb roasts presented by Miss Sue Lass of Denver, the Miss Bo-Peep of ASPC.

perceptible increase in our overall production.

One of our major objectives in the beginning of this program was to eliminate the dominating "end of the line" factor insofar as New York and New England are concerned. This past fall and winter to date, we have not been subjected to the over supply situation in these markets which so often in the past has had a definite adverse situation on our markets nation-wide. We like to think our efforts have been of assistance in this factor.

Food Level

In connection with our efforts at hotel and restaurant, or food level, a technical manual is being prepared, showing new ways to use lamb in all size carcasses, new portion cuts, and how all the carcass can be used profitably. One of our best opportunities lies in getting a more varied menu used in the food industry. In New York alone, for instance, where approximately one-half of the daily meals are eaten out, there is a marvelous opportunity to enlarge the use of lamb. The resort areas of Florida also offer an opportunity to greatly increase consumption at food level.

In conclusion, I would like to leave these few thoughts with you, in regard to lamb promotion.

First—we are now generally accepted as being an asset to lamb movement in all segments of the trade.

Second—we realize our program must be concurrent to conditions of supply and demand.

Third—we can assume a degree of responsibility for some increase in consumption, and in the use of a variety of cuts in all of our promotional areas.

BLM ADVISORY COUNCIL MEETS

Wilderness Areas Opposed

TWENTY-THREE cattle, sheep and wildlife representatives from 10 Western States concluded the 17th annual meeting of the National Advisory Board Council, Bureau of Land Management, March 1 in Washington, D. C., with adoption of 10 formal recommendations and the reelection of Chairman A. D. Brownfield, Deming, New Mexico, for the ninth consecutive year. The meeting opened on February 26.

Chief among the recommendations was that transfer of Bureau of Land Management-administered timber lands to the Forest Service should be conditioned upon reciprocal transfer to the Bureau of all nontimbered land presently within the exterior boundaries of national forests. Such transfers are specifically provided for by Presidential proclamation under Section 13 of the Taylor Grazing Act, the Council said.

Also unanimously endorsed by the Council was a recommendation opposing the inclusion of grazing land in any soil bank program as is proposed by H. R. 2771 and H. R. 2871.

The Council expressed concern about removal of large areas from the tax rolls through purchase of private lands by Federal and State agencies and recommended that hearings be held before county commissioners when such purchases are proposed in excess of 320 acres.

To perpetuate certain grazing rights on lands within the Grand Canyon National Monument in Arizona, the Council went on record as favoring legislation to eliminate from the monument all lands north of the Colorado River not needed for recreational and scenic purposes.

In other recommendations the Council voted against establishment of a national wilderness preservation system, contending that setting up of wilderness areas would exclude all multiple use and lock up many natural resources needed for the economic well-being of the Nation; endorsed the 5,000-acre limit proposed in H.R. 627 on military withdrawals that can be made without approval by Congress; and opposed enactment of H. R. 3378 unless grazing advisory boards are exempted from the requirement that only Government officers be permitted to serve as chairmen.

During the three-day conference, Council members heard:

A comprehensive report from BLM Director Edward Woolley to the effect that, with more progress and funds being realized than ever before, the future for range management "looks bright";

An appeal from Assistant Secretary

Hatfield Chilson for continued help from the Board in meeting "the biggest problem of all—intelligent management of public lands in view of the terrific competition we are having for both lands and resources . . .";

Praise from Senator Henry C. Dworshak, Idaho, for the better comprehension of problems that the grass-roots perspective gives Council members;

A reiteration by Representative Ben Jensen, Iowa, of his conviction that the increase in appropriations for soil and moisture conservation on western range lands from a half-cent to 2½ cents per acre in the past 10 years is a "long way from enough" (he expressed the hope that some day the cold war will be over "so that we can appropriate something in the neighborhood of what is right, proper, and necessary for rehabilitation of the public domain");

A plea from Chairman Brownfield, in view of seriously declining underground water supplies, for active support of the Department's saline water conversion program which has already reduced conversion costs from 60 to 20 cents a gallon, sufficiently low for culinary use;

A tribute from Floyd W. Lee of San Mateo, New Mexico to the Taylor Grazing Act for having enabled ranchers of the Southwest to endure the worst drought in 750 years because this Act stopped "continual fighting over the range, permitted orderly grazing through fencing, and made possible the development of water and resultant termination of long, costly trailing of livestock to water holes."

The Department of the Interior's Conservation Award was presented to A. D. Brownfield at the conclusion of the Council meeting "for outstanding service and leadership in conservation of the Federal range."

TOO MUCH RAIN, GRASS—POOR FELLOWS

New Zealand wool growers have been troubled by too much grazing for their sheep this season, a result of exceptional rains. The plentiful feed conditions of spring have continued into the summer throughout the country.

In many areas, livestock has been unable to cope with the amount of feed. Farmers have been embarrassed by the amount of feed available. Some areas report lambs doing very well, while other districts say that the wet spring and summer has hurt their lambs' condition.



TO SELL NUTRITIOUS LAMB

ASPC Home Economist Betty Fell prepares a lamb dish for the Baltimore-Washington, D. C. TV audience.

ASPC Consumer Service Pushes Lamb

by MRS. EVADNA HAMMERSLEY
Director of Consumer Service, American
Sheep Producers Council

THE work of the ASPC's home economics field staff, operating under the Consumer Service Division, might be likened to the infantry in the United States Army. Paid advertising, like the big Naval guns and the aerial attacks of the Air Force, make the noise, attract a lot of attention and without question, accomplish a lot with telling blows. It still takes the steady plodding and consistent effort of the foot soldier and the mop-up squads, however, to win and hold an objective. It takes the same kind of personal hand-to-hand work on the part of our field home economists and field merchandising men to attain the objectives of the ASPC and hold them.

What does an ASPC field staff home economist do? She is paid to work half-time promoting lamb in every possible way, but she often puts in more than half her time because selling lamb to the consumers of her area has become a crusade. At present, a half-time home economist is working in Los Angeles, San Francisco, Portland, Seattle, Denver, Chicago, Detroit, Cleveland, Philadelphia and Washington, D. C. Home economists work in their home cities and surrounding areas as time permits.

Specifically, the duties of a field home economist include the following tasks. She must:

1. Appear on radio and television programs in interviews and demonstrations of lamb cookery. Offer recipes.

2. Urge TV stations to use the film, "It's Lamb Time," as a filler in public service time.
3. Do cooking schools where possible, tying in with public utility companies, newspapers, home shows, fairs, or wherever opportunity presents itself and time permits.
4. Work with all other professional home economists employed by appliance manufacturers, national food concerns, food associations, and utility companies, to get them to use lamb in their cooking schools, appliance demonstrations, or in recipe tie-ins where national trade ads are possible.
5. Work with youth groups teaching indoor-outdoor lamb preparation to Girl Scouts, Boy Scouts, 4-H Clubs, Campfire Girls, Future Homemakers, etc.
6. Work in high schools and colleges demonstrating cookery of less familiar cuts before home economics classes. Schedule slide programs, film showings, etc. Where personal demonstrations are not possible, offer wall cutting charts and recipes to teachers.
Call on school cafeteria managers regarding the use of lamb in school lunches. Supply cafeteria managers with quantity recipes.
7. Keep in touch with local food editors of newspapers to determine if our product publicity releases are being used. Report needs and ways in which releases can be more helpful.
8. Work with dietitians in hospitals.

Supply with quantity recipes. Urge use of lamb on diet trays. Point out nutritive value and digestibility of lamb.

9. Work with home demonstration agents, extension directors in vocational work and county agricultural agents to arrange informative programs on lamb, demonstrations, slide programs or film showings. Offer recipes.
10. Schedule promotional appearances before women's clubs using slide programs, film, or demonstrations. Any and all women's clubs of 50 or more, such as PTA, Home Demonstration Clubs, Electrical Women's Round Table, and others, to be contacted. Offer recipes.
11. Call on nutrition directors of YWCA and Red Cross. Urge use of lamb in teaching their homemaking and nutrition classes. Urge use of lamb in their own cafeterias.
Work with merchandise man on possible contacts with women tea room and restaurant managers where additional assistance may be needed.
Watch for conventions, exhibits and special events where tie-ins for lamb promotion may be possible.
Etc., etc., etc.

To date, in the comparatively few months in which the department has been operating, hundreds of hours of free radio and TV time have been obtained by these women in telling the lamb story. They have placed recipes and wall cutting charts in the hands of every teacher of home economics in their individual States, or are now in the process of doing it. They are working with church groups to get the quantity recipes in the hands of church kitchen people responsible for church suppers, etc. Currently, they are concentrating, as time allows, on presenting demonstrations before home economics classes in the schools. A series of four lamb cookery transcriptions made by the ASPC's Director of Consumer Service is now running on 50 radio stations in free time promoted by the director. When this series ends, the transcriptions will be offered to other stations.

Future possibilities are endless. We have set objectives that are not impossible to reach, with time and a little patience, and this division is inching forward carefully, holding its ground. The industry needs the contributions to be made by every branch of ASPC armed might to win this battle for the consumer's support—advertising, publicity, merchandising and the help of capable officers.

The fine start made by the Consumer Service Division's field staff shows we have a mighty fine "infantry."

U. S. Government Owns 48.6 Percent of Western Lands

(Editor's Note: An inventory report of real property owned by the United States as of June 30, 1956 has recently been presented to the United States Senate as Document No. 25. Extracts of particular interest to the western area are given here.)

THE total federally owned land of 409.5 million acres is 21.5 percent of the total land area of 1,903.8 million acres comprising continental United States.

The Federal land in the 11 Western States, in addition to comprising 89.4 percent of the total of federally owned land in the United States, also constitutes substantial portions of the total land area of each of these States. In four States (Nevada, Utah, Idaho and Oregon), the land acreage owned by the Federal Government comprises more than half the total land acreage within the State. These lands are principally public-domain lands used for national forests, national parks, grazing and other purposes.

The following tabulation shows the Federal acreage in each of the 11 Western States compared with the total land area in the State, and the percentage of Federal ownership, as compared with the two other major State groupings:

STATE	Acres (in millions)		Percent owned by Federal Government (excludes trust properties)
	Federally owned	Total in State	
Western States (11):			
Nevada	61.5	70.3	87.5
Utah	37.0	52.7	70.3
Idaho	34.6	53.0	65.3
Oregon	31.6	61.6	51.3
Wyoming	29.9	62.4	47.9
California	46.9	100.3	46.7
Arizona	32.1	72.7	44.2
Colorado	24.1	66.5	36.3
New Mexico	27.5	77.8	35.3
Montana	28.1	93.3	30.1
Washington	12.7	42.7	29.7
Subtotal 11			
West. States	366.0	753.3	48.6
South Atlantic, South Central States, and District of Columbia (16)	24.4	562.2	4.3
Northeastern and North Central States (21)	19.1	588.3	3.2
Total	409.5	1,903.8	21.5

Of the total of 409.5 million acres of federally owned land, 380 million acres or 92.8 percent is under the control of two agencies; namely, Interior and Agriculture.

The following tabulation shows the land acreage under the control of the

principal Federal land-owning agencies and the percent of the total Federal land acreage:

AGENCY	Acres (in millions)	Percent of total
Interior	212.4	51.9
Agriculture	167.6	40.9
Defense	26.6	6.5
Atomic Energy Com.	1.9	.5
Subtotal	408.5	99.8
Other agencies (19)	1.0	.2
Total	409.5	100.0

The 409.5 million acres of federally owned land in the United States are subdivided into categories according to the predominant usage of each installation. The following tabulation shows Federal land acreage for the major land usage categories and the percent of the total acreage:

PREDOMINANT LAND USAGE	Acres (in millions)	Percent of total
Grazing	182.0	44.4
Forest and Wildlife	172.0	42.0
Military (except airfields)	18.4	4.5
Parks and historic sites	15.4	3.8
Reclamation and irrigation	8.1	2.0
Flood control and navigation	4.6	1.1
Subtotal	400.5	97.8
Industrial Airfields	2.8	.7
Power development and distribution	2.4	.6
Other land usage	2.1	.5
	1.7	.4
Total	409.5	100.0

The total federally owned land of 409.5 million acres is comprised of 360.3 million acres of public domain and 49.2 million acres acquired by purchase and other methods.

No costs are shown in this report for public-domain lands.

The cost of federally owned land other than public domain is \$2,463 million.

American Women Prefer Wool, Survey Discloses

FOR their spring, fall and winter suits and separate skirts, American women prefer wool to any other fiber, according to results of a sample survey released by the U. S. Department of Agriculture.

About 2,500 women, a cross section of adult homemakers and working women throughout the country, were inter-

viewed in their homes. Interviewers sought to learn, among other things, what fibers women used in cool-weather suits and skirts and in sweaters, what fibers they liked best, and what they liked and disliked about various fibers. The survey was a part of the Department's program to increase consumption of farm products.

For suits and skirts, no other fiber approached wool's popularity, regardless of whether women were telling what they had in their wardrobes, what they had bought in the year preceding the interviewing, or what they liked best. Rayon or acetate were well represented in women's wardrobes and purchases, but other synthetics had so far made little impact, even when blended with wool. In sweaters, on the other hand, Orlon was making great inroads—more women said they had bought Orlon sweaters than wool sweaters in the preceding year, and nylon sweaters were also popular.

Practically all women had something good to say about wool, particularly that they liked its wearability, its warmth, and its smart appearance. The few who criticized wool said that they thought it irritated their skin or was difficult to clean and care for. Orlon, wool's major competitor for sweaters, was liked especially for a characteristic in wool that was criticized—care and cleaning—and also for holding its shape.

The principal reason women gave for selecting the last suit, skirt, or sweater they had bought was that they liked the fabric. Other reasons included color, style, and fit; but fabric led them all.

The study pointed out some directions research might take to improve the standing of natural fibers, for it indicated that many women would like to be able to wash skirts and sweaters, and that they would like wool garments premothproofed.

Other findings from the survey include women's attitudes toward imported fabrics and also toward labeling of wool garments; also home sewers' and knitters' uses and appraisals of fibers.

A free copy of this report, "Women's Attitudes Toward Wool and Other Fibers," Marketing Research Report No. 153, may be obtained from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

"WHAT ABOUT SHEEP" AVAILABLE

This 60-page booklet, originally printed in 1950, contains much valuable information for all sheepmen. It may now be obtained by sending 25 cents to Department W, National Wool Growers Association, 414 Crandall Building, Salt Lake City 1, Utah.

The National Wool Grower

Research holds the key to wool's future



WESTERN UTILIZATION RESEARCH BRANCH LABORATORY

This laboratory in Albany, California, was built in 1940 and houses research on a variety of agricultural products. Besides wool, these include vegetables, fruit, poultry products, field crops, such as rice, sugar beets, wheat and alfalfa.

by DR. H. P. LUNDGREN
Western Utilization Research Branch, ARS
Albany, California¹

It is gratifying to say that wool has the distinction of being known by and unsurpassed in many important textile qualities. Fabrics made of wool possess a unique combination of desired qualities, including handle, drape, tailoring quality and moisture sorbency; also, spinnability, texture, felting and dyeing.

Then why are we so concerned with utilization research on wool? We are concerned because we know that wool can be improved to give it desirable qualities it does not possess. Present laboratory results show that wool can be improved in resistance to shrinkage in laundering, to yellowing by light, to fabric weakening by acids in dyeing and carbonizing, by alkalis in scouring and alkaline dyeing, by bleaches in processing and in use. Wool can be made more wrinkle-resistant, it can be given more permanent pleats, and it can be made permanently moth-resistant.

The work to achieve these and other desired aims is not easy. It is necessary to find treatments which are permanent, cheap, easy to apply, and which do not alter other desirable wool qualities. The potentialities are good. An enormous field for modifications of wool remains to be explored. Numerous and cheaper chemicals and so-called textile auxiliaries have been made available. The purpose of this discussion is to tell you of progress along these lines.

Wool is facing a serious situation. We are aware of the inroads being made, by man-made fibers, into traditional uses of wool. Materials, made from synthetics, are competing with wool. They are promoted on the basis of their stability to laundering, wrinkle resistance, ability to hold pleats, whiteness, chemical stability and moth resistance.

The synthetic producers are engaged in intensive research spending as much as three cents of every sales dollar

in research and development. Last year 465 million pounds of non-cellulosic synthetics were produced. This industry started in the 1930's. In 1948 wool shared 31 percent of the fiber market on a dollar basis. In 1955 wool shared 15 percent and by 1960, estimates have been made that wool will share 12 percent. Synthetic producers are now attempting to make fibers from raw materials costing one-tenth as much as present raw materials.

The synthetic producers are providing textile mills with fibers of highly uniform qualities—whose qualities can be adjusted and maintained to fit specific purposes, and which can be manufactured by increasingly efficient procedures. Moreover, the synthetic producers are providing textile mills with detailed processing information on how to process their fibers on wool machinery.

Now, let's have a look at what is happening in the wool processors' industry. In an earlier stage wool manufacturers were masters in the art of transforming fleeces into textiles, frequently of highly prized designs and textures. To survive in present-day competition, mills find it necessary to mass-produce goods of standardized quality. At the same time they are faced with ever-increasing demands for materials of new designs, textures, finishes, wash-and-wear fabrics and chemical stability.

In recent years many wool mills have been forced out of business; some 200 establishments, out of 830, have disappeared in the eight years prior to 1956. Many existing mills are going over wholly or partly to synthetics. Because of their weakened financial position, mills are no longer conducting any extensive work on new and improved wool products and better methods of manufacture. Many scientific staffs have been disbanded. Remaining scientists are concerned with day-to-day mill problems and trouble shooting. Similarly, wool utilization research in private laboratories and research institutes is at a very low level and much of it is concerned with day-to-day mill problems.

Recognizing that nearly all true and permanent gains in agriculture and industry today have grown out of scien-

¹Speech made before the 92nd NWGA convention, Las Vegas, Nevada, January 23, 1957.

tific and engineering development, and recognizing that the prosperity of agriculture and industry depends on discovery, research, development, new directions, new technologies, the Department of Agriculture is developing a wool utilization research program. This work is centered at the Western Utilization Research Branch, of the Agricultural Research Service, at Albany, California. This program was initiated in 1949. With additional funds made available this fiscal year we now have 13 scientists working on wool.

To date our program has been limited to basic laboratory

studies with two principal objectives:

1. To develop better understanding of the basis for quality and quality differences in wools (as raw materials for modification and manufacture).
2. To discover desirable modifications which impart permanent, desired and practical properties.

In addition, we have limited work on wool scouring, with grease recovery and on the grease constituents. The work on grease constituents is being done at the Eastern Utilization Branch in Philadelphia.

WOOL FOLLICLE

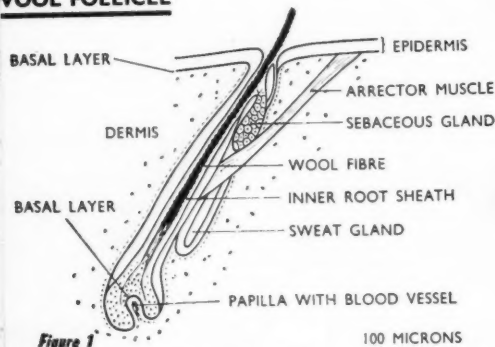


Figure 1

Figure one depicts the most wonderful laboratory in the world as far as wool is concerned, the wool follicle in the skin of a sheep. Here we have continuous, mass production, automation—everything you'd like to have in a wool mill. At the base of the follicle, living cells with nuclei are produced. As they move up the narrow channel of the follicle, they gradually transform into the wool fiber. This transformation is an exceedingly complex process. It involves the changing of the living spherical cells with fluid contents and nuclei into non-living,

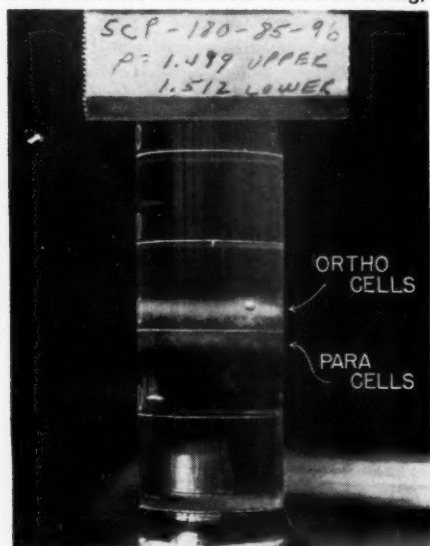


Figure 4

In figure four the separation of these two cell types (recently accomplished at our Albany laboratory) is shown. The fiber is first macerated into its component cells. Then we cause this macerated material to layer in a column of dense liquid which causes the cells, differing

MERINO WOOL FIBRE

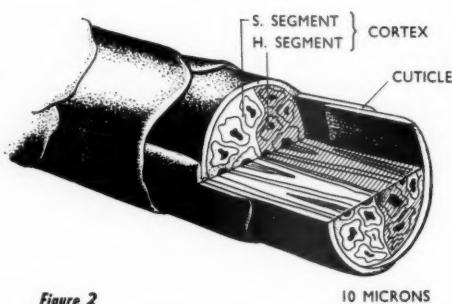


Figure 2

fibrous, highly elongated, spindle-shaped cells surrounded by scales.

In figure two the wool fiber is enlarged and split. Here we see the fiber surrounded by scales which form a protective structure. The scales or cuticle surround the cortex of spindle-shaped cells. These scales and spindle cells, in one way or other, contribute to the qualities of wool.

In figure three, the scale itself is shown. It is made up of at least three distinct structures known as the epicuticle, exocuticle and endocuticle. The epicuticle

FIBRE COMPONENTS

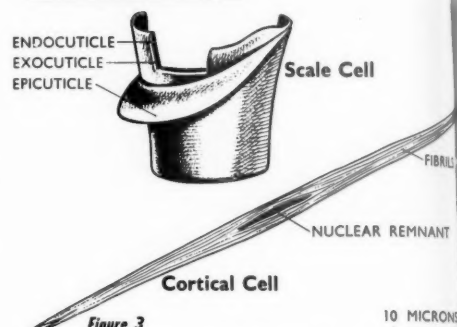


Figure 3

is a membrane on the outside. It contributes to wool's unique property of shedding water even though wool has high moisture absorbency. The fibrous spindle cells frequently contain nuclear remnants that were the living nuclei. These cells are of two types—called ortho and para cells. They occur in two adhering layers. The situation is something like that of a bi-metallic strip in a thermostat. Because of the difference in elasticity of these two layers, the wool fiber has a crimp. The more elastic of the two layers, the ortho layer, is on the outside of the crimp of the fiber.

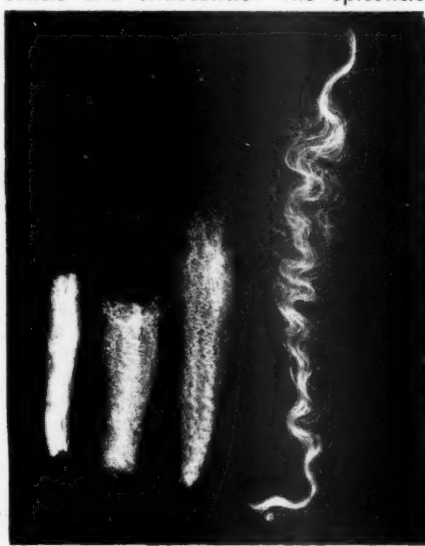


Figure 5

in densities, to fall into layers according to their density. In this way it becomes a simple matter to separate the two types of cells. Studies of these cells and their distribution in the cortex of the wool fiber is leading to a better understanding of wool fiber crimp. Crimp, in

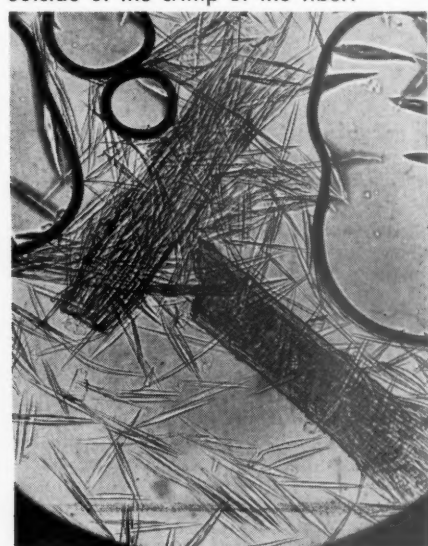


Figure 6

turn, is important in determining processing properties.

Figure five clearly shows the wide range in crimp of wools.

In figure six some of these separated cells are enlarged. We are separating

these cells from various wools and causing them to be further disintegrated, finally ending up with the molecules of which these cells are made. Molecules are being studied to find out how they are built. This information in turn is related back to the original fiber, its qualities and its behavior in various environments. We are taking wool fibers with high crimp and with low crimp and comparing them in an effort to learn how the wool fiber components contribute to its qualities in various environments.

Figure seven depicts one of the instruments used to separate and study these molecules. This is an ultracentrifuge. The rotor which this gentleman is putting in the centrifuge spins at a thousand revolutions a second and generates a field of a quarter of a million times gravity. Into this rotor we put solutions prepared from the separated cells. The solutions are whirled around at the very high speed which causes the molecules to separate. The heavier molecules are separated from the lighter ones just as one separates cream from milk. Information from this kind of study is important for understanding the basis for wool quality differences.

Figure 7



Figure eight illustrates another method we use to compare wool qualities. This instrument is used to study the stress-strain behavior of the wool fibers. It records the force required to stretch a fiber. This force is related ultimately to the structure of the various fiber components. When fibers are tested in this instrument, information is plotted electrically. Information of this sort (see figure 11) is an autograph of the wool fiber. It shows that as you apply force to stretch a wool fiber, it elongates, first of all very slowly. Finally, it suddenly begins to yield and then elongates more rapidly. It slows down somewhat at around 30 percent stretch. The important thing is that the fiber recovers its original length if the force is removed. This is one of the characteristics which distinguishes wool from most other fibers. From a comparison of these autographs of wool fibers, some untreated and some purposely modified with chemicals, we are deriving important information leading to a better understanding of how wool behaves in processing and in use.

Figure 8



Figure nine shows a carding machine used in relating the fiber characteristics to processing behavior. Fibers going through this machine are being studied in relation to their elastic properties.

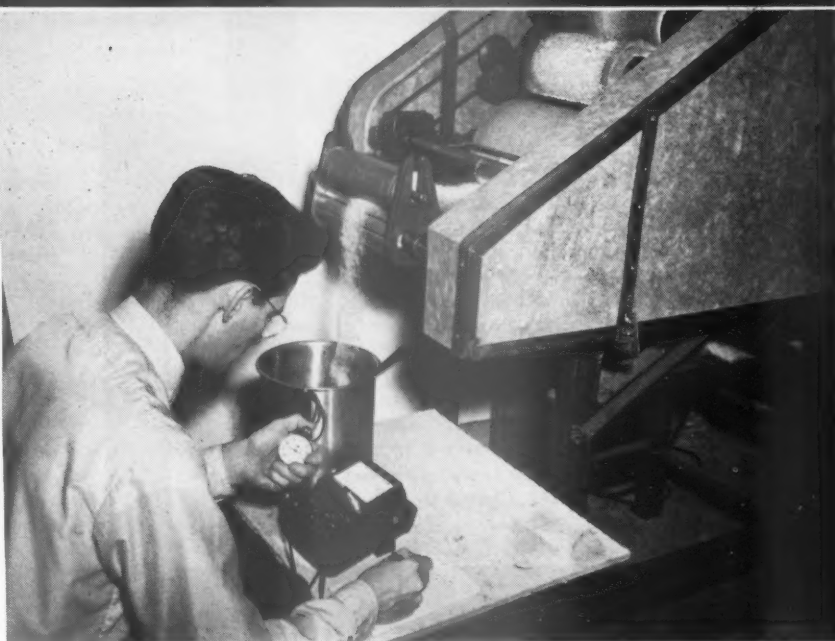
Figure 9

about the author—



Dr. Lundgren

Dr. Harold P. Lundgren is probably doing more actual research on wool and its utilization than any other scientist in the U. S. today. He has been building up this program since 1949 at the Western Utilization Research Branch of USDA's Agricultural Research Service. Joining the staff there in 1937, he now heads its Protein Section. His current project is to secure a pilot processing plant by which the new information about wool can be tested and made available to manufacturers for practical application.



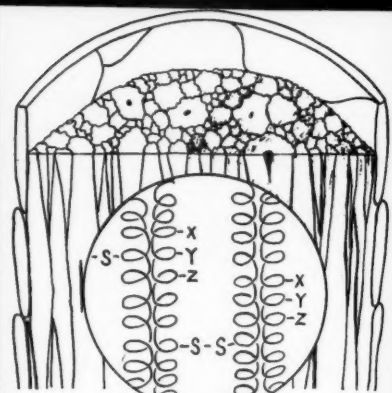


Figure 10

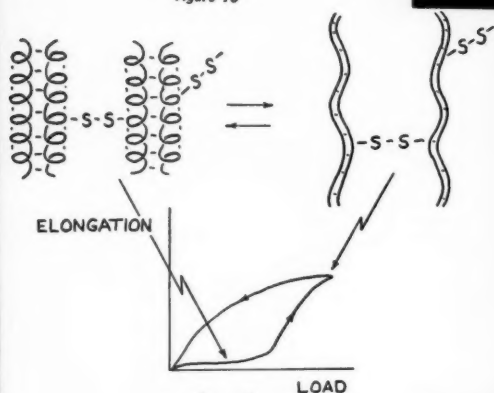


Figure 11

DEGRADATION OF WOOL BY ALKALI

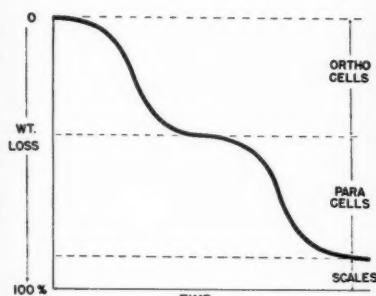


Figure 12

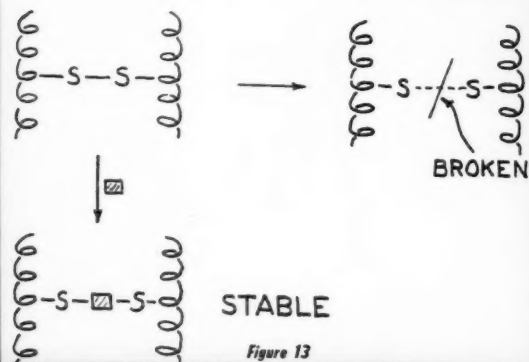


Figure 13

In figure 10 you see an enlarged drawing of the cell so that the molecules, or the heart of the wool fiber, can be clearly seen. Long chains of atoms tied together in spiral structures are depicted. The spirals are hooked together, back to back. Groups of spirals are tied together by two sulphur atoms. This is another of the distinguishing characteristics of the wool-sulphur vulcanization. It is very interesting to compare natural rubber with wool. We find that rubber is similarly made up of long spirals of connected atoms. But the natural rubber that comes from the tree is a sticky material, of no use to man. About a hundred years ago, Goodyear discovered that by an addition of sulphur he could improve the qualities of rubber and make a material that had elastic characteristics. This process became known as vulcanization, a good example of chemical modification of a natural substance. Over

the years, the vulcanization process has become better understood. We now have rubber materials with wide range in properties, depending upon the amount of sulphur that ties together the chains of atoms. The sulphur atoms in the heart of the wool fiber determine its quality in the same way. If the two sulphur atoms are separated (and they split very easily) wool no longer is wool.

As illustrated in figure 11 sulphur atoms keep wool from pulling apart even though the spirals of atoms are stretched out. The sulphur atoms also help in recovery of the fiber when the force is removed. The process is related to the autograph of wool shown at the bottom of the figure.

In figure 12 we note that by placing fibers into a water solution containing some alkali gradually the fibers lose weight. If we measure the weight loss we find that with time it follows the pattern shown in this figure. If we use other appropriate measurements, we find that the ortho cells are more easily attacked by the alkali than the para cells. With time, the alkali destroys both types of cells, leaving the scales, which are the most resistant to alkali.

Figure 13 illustrates what happens when we put the wool fiber to an alkali. It is this: The alkali splits the two sulphur atoms that tie together the spirals in the heart of the cells of these fibers. When we place a fabric in alkali, first it becomes harshened and weakened, and then, on longer contact with the alkali, falls apart. If we modify the wool fiber by inserting a chemical between these two sulphur atoms (as illustrated at the bottom of figure 13), we arrive at a modified wool which, for all practical purposes, looks and behaves the same as normal wool but is stable to alkali.

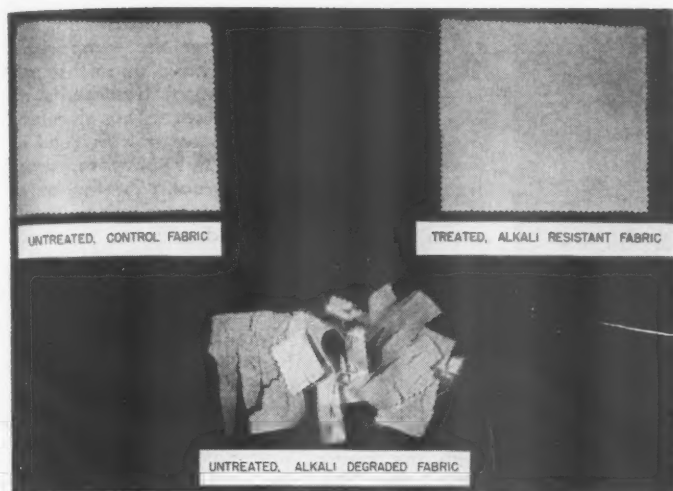


Figure 14

In figure 15 another example of chemical modification to improve wool is illustrated. This represents the effect of treatment of wool with a chemical known as butyl titanate. This chemical goes into the wool fiber and combines with certain centers in the fiber sensitive to damage by light. In order to measure these effects, an instrument is used to measure direct information on yellowing by recording the light reflectance. As the control or untreated fabric is irradiated by light, it yellows and the reflectance to light goes down. On the other hand, the wool fiber or fabric which has been treated with butyl titanate is perfectly stable to irradiation treatment under these conditions. Further study of this may lead to practical treatment to prevent yellowing.

In figure 14 the three fabrics pictured clearly illustrate this treatment. The one on the left is a normal piece of flannel fabric, a control. The middle one has been treated with alkali for a period of time. It has no strength at all, and is harsh and falls apart. The fabric on the right has been treated with a chemical substance inserted between the two sulphur atoms. This fabric has been exposed to the same conditions of alkali, temperature and time as the second fabric, but it is unaffected and behaves like the normal untreated fabric. This illustrates what can be done through chemical modification of wool.

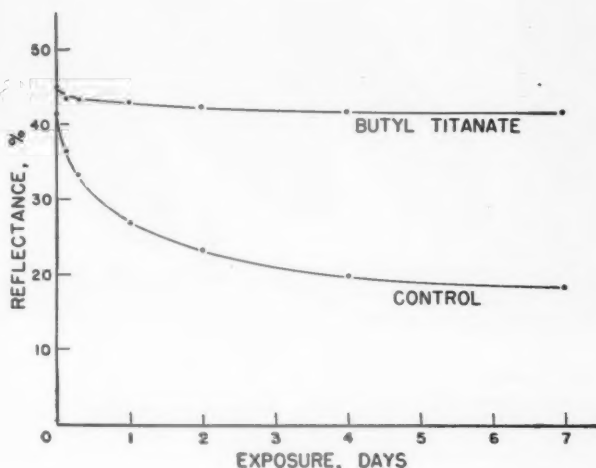


Figure 15



Figure 16

Figure 16 is the first step in another promising result in our laboratory—a new technique to determine the handle of fabrics. Handle is a very complex quality related to the softness and springiness of the fiber. These are subjective descriptions, and we would rather express qualities in numbers. In order to obtain this type of workable research data, we take three pieces of fabric and cause one piece to be pulled out from between two held together as a sandwich, as illustrated in figure 16. Underneath these fabrics we have placed a very sensitive and calibrated microphone which picks up the sound pro-

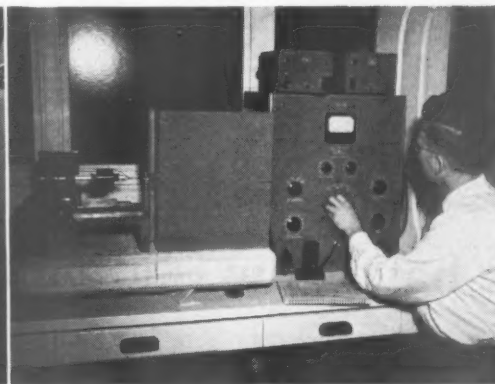


Figure 17

duced by these fabrics being rubbed together. In operation we close the box and insulate the microphone from outer noises.

Figure 17 shows the whole set-up with center fabric being pulled out from between the other two by the motor on the left. Microphone impulses feed through appropriate electrical equipment, analyzing the sound and giving a "spectrum" of sound. This spectrum expresses the intensity of the sound over a range of pitches—something like a spectrum of color. With harsh fabrics the sound intensity is greater.

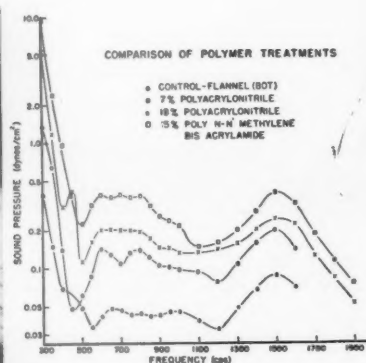


Figure 18

Figure 18 clearly depicts comparative sound spectrums of treated and normal wool fabrics. The peaks and valleys represent the sound intensity at various pitches and characterize the fabric as to its weave and the properties of its fibers. The bottom graph represents the untreated fabric; the graphs above represent fabrics treated with chemicals, resins, all of which impart shrinkage resistance. The intensities of sound at all pitches for the treated fabrics are highly indicative that the treatments have made the wool harsh. One of our main objectives is to find a shrinkage-resistance treatment for wool fabric that doesn't

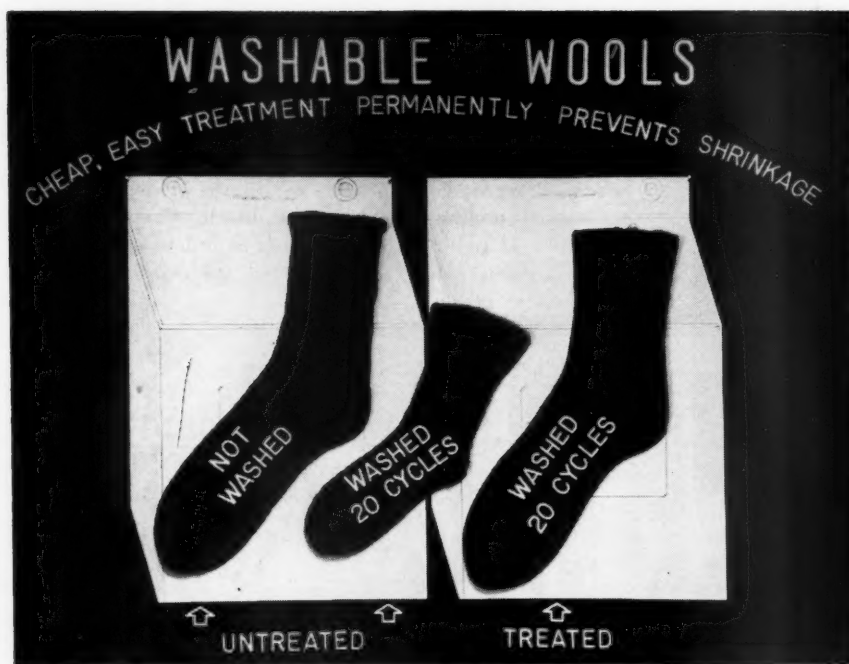


Figure 19

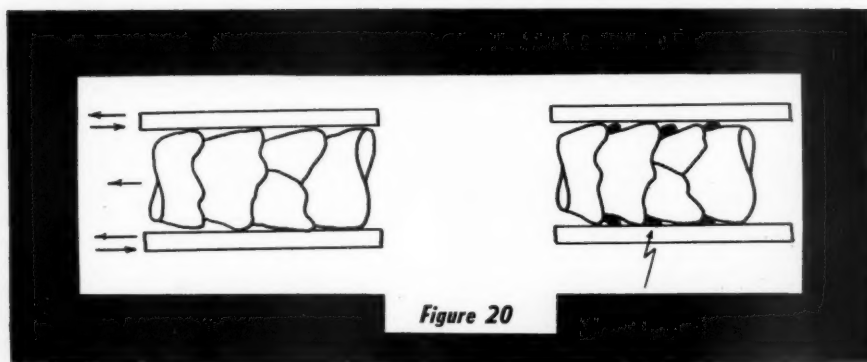


Figure 20

lead to harshness. With this instrument we have a very useful tool for the comparison of fabric treatments. We have gone through screenings of many chemical treatments of wool to impart shrink resistance. Though many of these including the same chemicals used in orlon, are effective for this purpose, most treatments harshen the wool. On the other hand, out of the comparison of many treatments, perhaps a hundred or more, we now have a treatment which does not harshen the fabric handle greatly.

Figure 19 illustrates what we have achieved with our latest treatment. On the right is a treated sock. It's been washed for 20 cycles in a home washing machine with no shrinkage, whereas the one in the center which is untreated has shrunk 30 percent compared with the control untreated, unwashed sock on the left.

In figure 20 you can see an illustration of the chemicals producing shrink resistance deposited on the surface of the fiber, not inside. Chemicals become anchored permanently and they modify the wool fiber in such a way that it no longer has what is called differential friction behavior. Differential friction behavior is related to the fact that all the surface scales point in one direction. So if wool fibers are rubbed when moist, they tend to migrate in one direction. This migration tendency leads to fiber consolidation into tightly packed entanglements known as felting. Felting is what occurs in laundering shrinkage. Thus by anchoring certain chemicals in the fiber surface, we can prevent this shrinkage. This treatment involves the use of two resins; neither alone imparts shrinkage resistance. We have found the conditions by which these chemicals can be applied—relatively cheap. We are presently conducting extensive studies on the wearing characteristics of such treated materials and ways of putting them into the fabrics, such as might be carried out on a practical scale.

What we must have now is a pilot processing plant!

THESE are some of the developments in our laboratory. There are others: for example, we are gaining important understanding of the mechanism of yellowing of wool in storage. We are studying the chemistry of bleaching, with encouraging findings on how to minimize fiber damage. We are studying chemical treatments which improve the felting of wool. We are initiating research on treatments to retain pleats and creases.

Our next important objective is to bridge the gap from the laboratory to direct mill application. This requires processing trials on pilot-scale processing equipment, which, up to the present time, we do not have. With processing equipment, we will be able to determine what qualities of wool, both natural and modified, need to be defined and evaluated to predict processing behavior. This information

is important to the grower who wants to know what to produce. This information is important to the industry as a whole because it will furnish to the mills what the synthetic producers are now doing. Processing instructions, performance data and new chemical finishing treatments are all needed to produce new and better wool products manufactured in the most efficient manner.

A fully rounded research program of this nature would assist the domestic industry to keep abreast in the textile race. It would increase returns to growers and processors. It would lower costs of wool products to consumers. It would expand market outlets through sales appeal of its new and improved products. This is the goal of utilization research for an advancing wool industry.

The National Wool Growers Association, by resolution at its Las Vegas convention, urged the establishment of a wool pilot processing plant, and has been allotted time on April 8 to testify before the House Subcommittee on Agricultural Appropriations on the need for the funds requested by the U. S. Department of Agriculture for its construction (\$105,000) and operation (\$400,000). Unless the results of the outstanding research on wool can be put into practical use, they are of little value to the general public.

Planned crossbreeding for the commercial sheepman

by G. M. SPURLOCK
Department of Animal Husbandry
University of California at Davis

CCROSSBREEDING means crossing two or more breeds or species of animals; the crossbred offspring are known as hybrids. In general, crossbreds are more hardy, vigorous, and productive than their parental breeds. This increased vigor of the hybrid animal, known as hybrid vigor or heterosis, has long been recognized by the stockman and animal breeder.

The crossbred shows increased productivity in two ways. One is that the crossbred female produces more young and more milk. Vigor and hardiness are both important attributes in range production. Secondly, crossbred young characteristically show fast, efficient growth, early maturity, lower mortality from birth to weaning, and general vigor and hardiness.

Very little experimental work has been reported on crossbreeding in sheep, where an effort has been made to evaluate the crossbreds in comparison to the production of parental breeds.

Recently, the Agricultural Research Service of the USDA published a summary of their crossbreeding investigations with sheep at Beltsville, Maryland.¹ Two and three-way crosses of Shropshire, Southdown, and Hampshire sheep were made; in addition, Merino rams were bred to two-way-cross ewes of Hampshire and Shropshire breeding. The crossbreds were compared with parental

breeds on the basis of survival and production.² In all production comparisons the two-way and three-way crosses outclassed the averages of purebred parents. The use of a wool-type (Merino) ram in the three-way crosses increased quality and production of wool significantly and did not materially lower carcass quality.

Dr. E. E. Rempel, Department of Animal Husbandry, University of Minnesota, has been kind enough to send the writer some of the experimental data on the crossbreeding of sheep as conducted in Minnesota. This experimental work was conducted by Mr. A. B. Salmella and Dr. Homer D. Fausch under the direction of Dr. L. M. Winters.³

From these experiments, as well as from observed experience with crossbreds in sheep generally, it seems obvious that a planned crossbreeding program for the sheep industry will prove beneficial as it has already done in the case of hybrid corn, hybrid poultry, and crossbred swine.

The difficulty thus far encountered in trying to harvest the benefits of crossbreeding lies in devising a workable plan that will fit in with the ordinary management procedures followed in commercial production. Such a plan should make use of the best purebred rams available from the breeder of purebreds. It should also keep the blood percentage of breeds used at a constant level for each animal in a flock so that all are as uniform and as productive as possible. It must exploit the productivity of the crossbred female as well as the advantageous physical characteristics of the crossbred young.

Let us consider the two principal purposes of crossbreeding in relation to animals. First, crossbreeding has been used to establish new breeds by blending the desirable qualities of two or more breeds. In this instance the offspring of the crosses are mated among themselves (crossbred to crossbred). When this is carried on for two or three generations, hybrid vigor is lost. Also, animals become highly variable, and we find great difference in appearance and productivity between individuals.

Following rigid selection and close breeding over a period of years, to fix the inheritance of the desired type, we obtain a new strain which gradually becomes more uniform with continued selection until finally the new strain becomes recognizable as a distinct breed. Such a procedure was followed in establishing the Columbia breed of sheep from crossing Lincoln rams on Rambouillet ewes.

The other purpose of crossbreeding is to do it in such a way that the breeder gets the continued benefits of hybrid vigor and the advantage of blending desirable breed qualities as well.

Thus far, breeders of sheep have thought they had to maintain at least one straight breed of ewes and purchase rams of another breed in order to get replacements for a crossbred ewe flock. Such a program has proved to be too laborious for most commercial use.

In 1935⁴ Dr. Lawrence M. Winters and co-workers recommended crisscrossing as a crossbreeding method for use on swine. Dr. Winter's plan involved the use of purebred boars of one breed (e.g., Poland China) on another breed of sow (e.g., Duroc Jersey). The gilts resulting from this mating were crossed to a Duroc Jersey boar and the gilts from the second mating were crossed to a Poland China boar. This alternation of sires continued

TWO BREED CRISSCROSS FOR RANGE SHEEP PRODUCTION

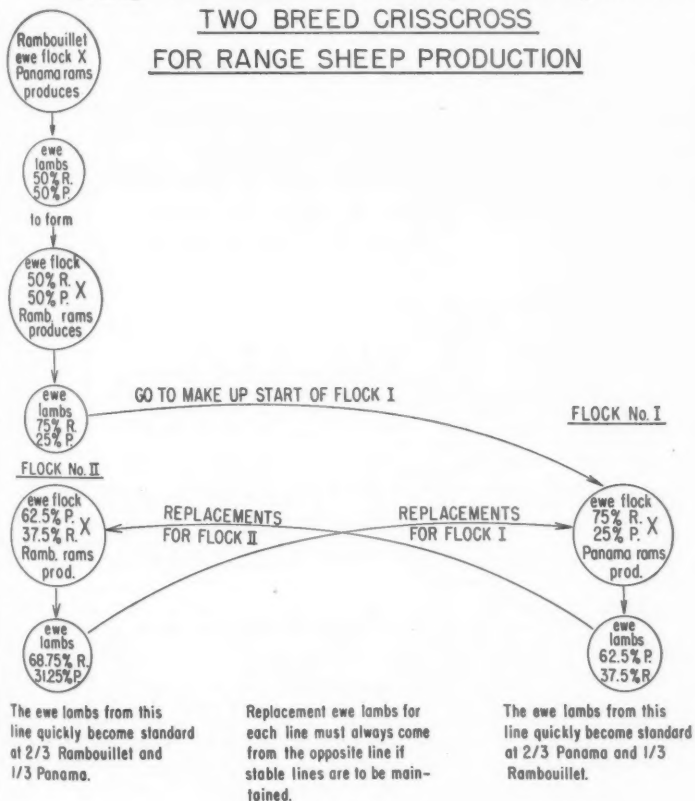


Figure 1

indefinitely, and the sows of each generation were sold as each new generation of young gilts became available. Thus, only a single herd of swine of one particular cross was maintained. This system is being widely and successfully used on swine. However, it would not be applicable to sheep production because the sheepman would not wish to sell his ewes after each generation, and sheep do not reproduce as rapidly or as prolifically as swine.

In Figure 1 the author has changed Dr. Winter's breeding system slightly to allow for the simultaneous breeding of two crossbred lines. The results in terms of blood percentages of the two breeds per generation become the

same under the two methods. This figure outlines the crisscrossing system to show what is actually taking place in regard to the makeup of each succeeding generation. The details of the breeding schedule as it actually occurs are given in Figure 2. It should be pointed out that the breeds mentioned here and in the various figures serve merely as examples. Any suitable breeds may be used in the crossing program. The grower should pick a breed on the basis of its suitability to the area in terms of what it may be expected to contribute to the cross.

Thus, where early lambs are desired, either the Merino, Rambouillet, or Dorset would be considered as possible

Crossbreeding (Criss-Cross) Plan for Sheep

►2,400 Rambouillet ewes

►90% lamb crop expected

►Cull 10% of ewe lambs at first

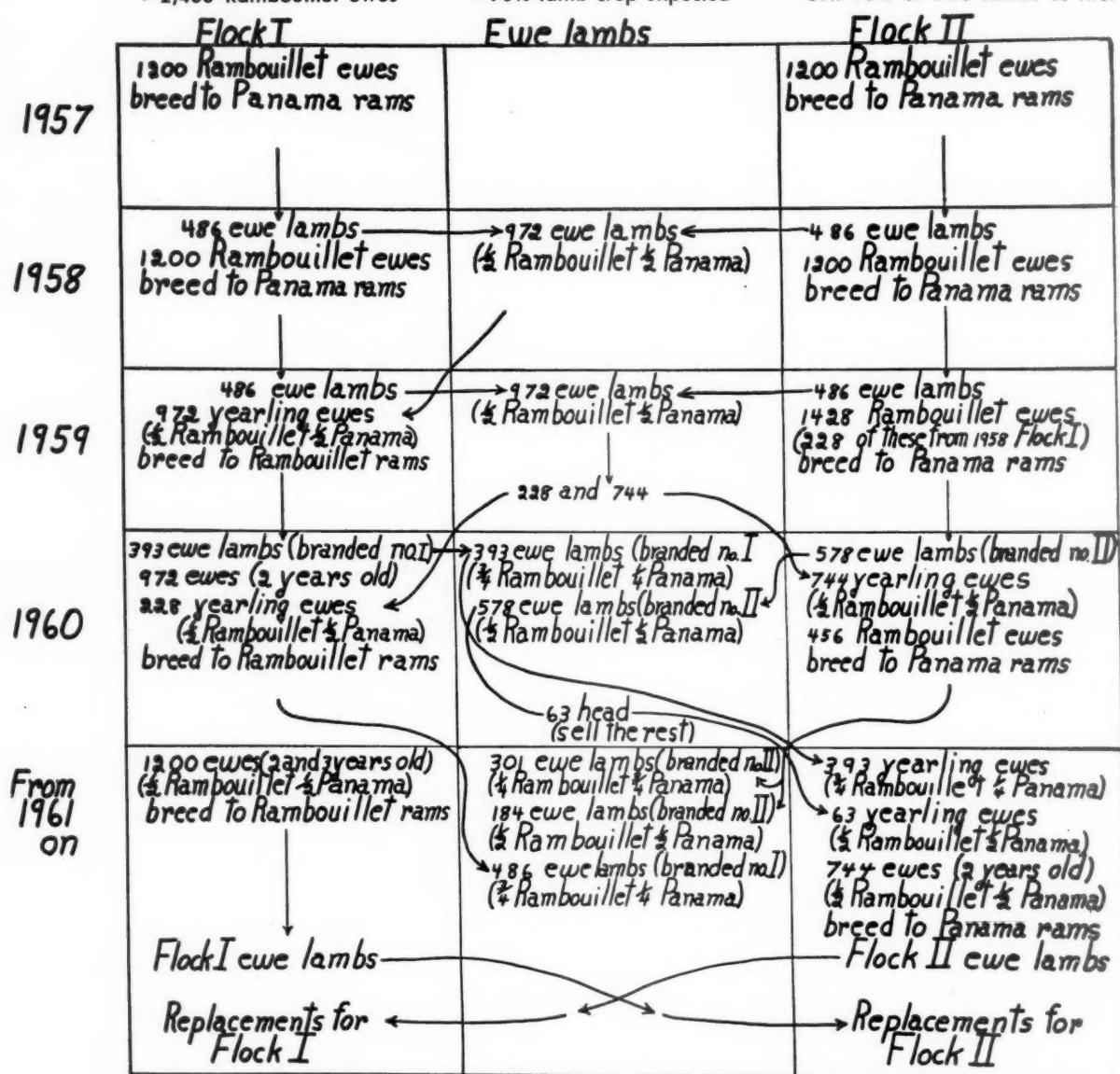


Figure 2

- Sell all replacement ewe lambs not needed.
- Be sure and earmark or brand ewe lambs from Flock I differently from those from Flock II.

- Use only Rambouillet rams on Flock I and Panamas on II.
- Flock I ewes will standardize after several generations at 1/3 Rambouillet - 2/3 Panama. Flock II will be 2/3 Rambouillet and 1/3 Panama.

THREE BREED CROSS FOR RANGE SHEEP PRODUCTION

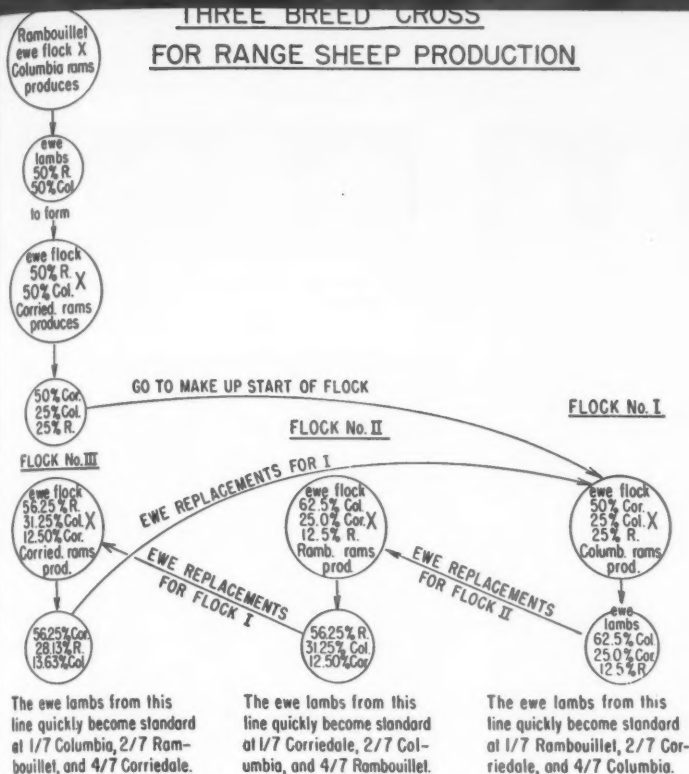


Figure 3

breeds to use, since these breeds are noted for the tendency to breed out of season. An additional possibility here is the Targhee which is three-fourths Rambouillet in origin. Where half-blood to fine, dense fleeces are desired, as well as ranging ability in dry country, Rambouillet, Merino and Targhee again are all suitable. If length of wool staple is to be increased at some sacrifice in fineness of fiber, some of the medium-wooled or longer-wooled breeds may be used with, for example, the Rambouillet. Build and conformation, open faces, fast maturity, ranging ability, and other characteristics of breeds—and even of lines within breeds—can form a basis for choosing the breed or type of ram used here.

The producer may ask, "Can I use blackfaced breeds in such a crossing program?" Of course he can. However, the writer believes that blackfaced breeds should be crossed among themselves as a group. When whitefaces and blackfaced are crossed, the grower should expect some loss of flocking instinct, longevity, and weight of shorn wool to offset the superior mutton characteristics offered by the blackfaced breeds. He may also expect some black hair and fiber in his wool clip.

Although many people believe that crossbreeding is detrimental to the purebred breeders, proper use of crossbreeding is actually beneficial. Here the major emphasis is on the quality and productive ability of the ram used as well as the uniformity and consistency of performance of the flock from which he has come. This is because the flocks of crossbreeds will soon take on most of the joint characteristics of the rams used in their respective blood proportions. Two lines of scrubs can only be expected to produce scrubs. Growers must still depend upon the breeder of purebreds to furnish them with highly productive rams.

From Figure 1 it can be seen that the rate at which the two-thirds to one-third proportion of blood in each flock is reached will depend upon our rate of replacement, or in other words, the population turnover in terms of years of use of an earlier generation. For this reason a more uniform population in each flock will be attained if replacements are made at the maximum rate and older ewes are sold off until the flocks are composed of fourth-

or fifth-generation crossbreeds. Any of the earlier crossbred generations would be excellent ewes to cross to blackface rams for the production of market lambs. They should therefore find a ready sale as breeders. The same is true of excess ewe lambs which will not be needed for the annual replacements after equilibrium is reached in a crossing program.

The use of Hampshire x Suffolk rams on these ewes will give a four-breed cross in the resulting lambs. This should approach the maximum degree of hybrid vigor that can be obtained in sheep production.

Figure 2 shows the details of a breeding program as carried out on a large ranch or range setup where 2400 ewes are bred annually. This chart is made on the assumption that the operator has sufficient feed and space on the range for only 2400 head of breeding ewes and his replacement ewe lambs. The surplus Rambouillet ewes are sold in 1959 and years following as fast as crossbred replacements are available to make up flocks I and II.

Ninety percent lambing is taken as an average for good operators over the West. Many flocks will greatly exceed this. Where a higher lambing percentage is attained, the operator can get into his crossbreeding program more rapidly. With this system the producer is folding into the inheritance of his flock the superior productive ability of outstanding rams at the rate of 50 percent per generation for each group of rams used. This occurs automatically, and the offspring cannot be improved by selection but only by the choice of superior rams at the time of purchase. The producer should cull the ewe lambs to remove any that show the effects of adverse environment or of disease, injury, etc.

Obviously, the ewes of the two flocks must be bred and probably lambbed separately. If a distinguishing ear mark or brand is used to identify the lambs born from ewes of each group, the two flocks may be lambbed together. This system will, therefore, only fit into the management schedule where ewes are normally ranged in at least two flocks, as is the case with many range setups; or it may be used on ranches where the two flocks can be separated by fences for at least the breeding season.

Figure 3 gives the general plan to be followed if a three-breed rotational breeding system is to be followed rather than the two-breed crisscross used in Figures 1 and 2. Here the blood percentages become 1/7, 2/7 and 4/7 in regard to the breed influences from each breed used in the crossbreeding plan. Because of the necessity of keeping range and breeding animals in three flocks rather than two, the writer feels that a three-breed rotation would not be practical for commercial use except for very large operators.

¹1956 Hybrid lambs. A.R.S. Special Report. A.R.S. 22-32, October. Agricultural Research Service, U. S. Department of Agriculture.

²Production was evaluated as ewe-lamb weights times 1.1 plus ram-lamb weights plus fleece weight of the ewe times 2.5. This total was multiplied by 100 and the result was divided by the weight of the ewe to get a production index. This is actually production per 100 pounds of ewe weight.

³In their 1953 trials these Minnesota workers crossed rams of the Minnesota 103 breed (derived from Oxford, Rambouillet, and Lincoln) to ewes of the Minnesota 100 breed (derived from Rambouillet, Cheviot, and Border Leicester). They measured production per 100 pounds of ewe. This was figured as lamb weight plus lamb equivalent of the ewe's wool weight divided by the weight of the ewe and multiplied by 100. The lamb equivalent of the wool was considered to be 3.4 times the wool weight of the ewe. The lamb weight was subjected to a small correction factor for the sex of the lamb. On this basis these workers found a production index equivalent to 13 pounds of lamb greater production per 100 pounds of ewe for the Minnesota 100 x 103 cross than for the Minnesota 100 line alone.

⁴1935. L. M. Winters, O. M. Kiser, P. S. Jordan and W. H. Peters. A six-year study of crossbreeding swine. Minnesota Agr. Exp. Sta. Bul. 320.



SHEEP AND WOOL SALES ACTIVE IN MONTANA

SHEEP and wool sales the past month indicate an active demand in this area as is true over the West. About half of the Montana clip has been contracted at prices 9 to 12 cents above last year. There has been a strong demand for ewes with a limited number for sale. Some blackface yearling ewes have also been contracted by the Kentucky trade.

As a whole we have had a good winter for livestock. Generally the ranges are the shortest they have been since the 1930's. Most of eastern Montana has a shortage of moisture since last year's drought. Some irrigated areas have a surplus of hay.

Small flocks lambed out this month had a heavy drop of large, thrifty lambs. One operator told me he has had excellent results after wintering his ewes on straw.

—Gerald Hughes, President
Montana Wool Growers Association

MARCH STORMS AID ON WYOMING'S RANGES

THERE are signs of spring in the air in the Big Horn Basin in Wyoming. We have had weekly March snow storms which have not been big, but they have given us some much needed additional moisture. These storms have been fairly general over the State. The weather has been good for March and in sheltered places the grass is showing.

Most of the early shorn wool has been sold as fast as it was shorn. The prices in the Basin have ranged from 50 cents to 56 cents a pound. There has been some wool sold in the Sheridan area for as high as 58 cents a pound.

The sheep are in better condition in this area than usual. This is because most of them have been on feed on the

ranches all winter, due to the drought in our part of the State.

Speaking of drought, there seems to be a great deal of difference in the interpretation of the Federal drought program by the local boards. Most of the boards have considered the program as a drought matter. Some boards have considered the program as a welfare instead of a drought relief law. It seems the law should have some clarification so that all of the local boards would operate on the same basis.

Another matter which I would like to bring to your attention is this: A number of lambs were shipped to market this past winter and put in commercial feed lots for fattening. Most of these lambs were fed a prepared feed in the form of a pellet. These lambs did well, but the cost of feed per pound of gain ran in many instances from 30 cents to 33 cents per pound. The market would have had to rise from four to five cents a pound from the time the lambs went in the feed lots until they were sold to break even. Any grower who plans on feeding in these commercial lots should look this over very carefully before going into this kind of a feeding program at present prices. In many instances the feed costs were higher than the net lamb check.

What we need most in Wyoming is moisture to insure a good growing season. If we get this, and a little price rise, things will look much brighter than last year.

—Howard Flitner, President
Wyoming Wool Growers Association



Robert W. Lockett
Arizona



Dominic Eyherabide
California



Chester Price
Colorado



Andrew D. Little
Idaho



Gerald Hughes
Montana



Tony Smith
Nevada



Julian Arrien
Oregon



Henry Wahlfeldt
South Dakota



T. A. Kincaid, Jr.
Texas



J. R. Broadbent
Utah



George K. Hislop
Washington



Howard Flitner
Wyoming

WITHOUT A MARKET, A PRODUCT IS USELESS

THE sheepmen of this country need a market for their product. The ASPC has as its primary function the creation of such a market. This need was expressed as well as I have ever seen it, by David Austin, of the U. S. Steel Corporation, when he said:

"It has always been true that too many people go into business because they know how to *make* a product, while too few people go into business because they know how to *sell* a product. The sellers—the merchandisers—the commercial men—are the prime movers in the economic picture.

"To drive this point home, I have often used the expression, 'It is much more important for a business to own a market than a mill.' Anyone with necessary capital can erect a mill—one which will produce a quality product, in adequate quantity, at low cost."

The sheepmen of this country produce a high-quality article but in too many cases they have to beg their first customer, the packer, to take the lambs, and the packer in turn, has to beg too many stores to even stock lamb. There is no point in raising lamb if we have no one to use our product.

I have a great deal of faith that the ASPC will be successful in its fight to create a broader market for lamb but we must realize that this market will not be built in one or two years but will take several years.

—George K. Hislop, President
Washington Wool Growers Ass'n.

IDAHO SHEEPMEN HELP OBTAIN RESEARCH FUNDS

WOOL sales continue to be reported daily. Six clips sold in eastern Idaho, the Mud Lake section around Terreton, at 53½ cents; western Idaho clips at 51-54½ cents; and a southern Idaho farm pool at 52½ cents.

Range conditions in eastern Idaho are favorable for this time of year but a little more moisture would be welcome. Most growers in this vicinity report average or above in lambs. Southern and western Idaho, our earlier lambing areas, have had very successful operations to date.

Our State legislature closed March 16 after a 69-day session. Through the joint efforts of wool growers, we obtained funds for the University of Idaho to build and staff a disease research laboratory, and additional monies for the Extension Service. Individually we wool growers have a job to tend to our business at home but through organization our collective efforts handle many all-important tasks.

Nationally as individual sheep owners, we have a much bigger and more important job confronting us but all of us working together supporting our State and National associations will get that job done. It takes the individual membership, personal interest and concern of every sheep owner.

—Andrew D. Little, President
Idaho Wool Growers Association

BLM ADVISORY COUNCIL DISCUSSES MANY PROBLEMS

THE National Advisory Board Council of the Bureau of Land Management held their annual meeting in Washington, D. C., from February 26 to March 1. It was a very pleasant experience meeting with sheep, cattle and wildlife representatives from 10 Western States along with the personnel of the BLM and Congressional representatives. Discussion of many problems, such as the effects of the present and pending conservation programs, weed control, range rehabilitation, soil bank, wildlife and recreation, land withdrawals and general range problems were included in the agenda.

One of the most significant problems discussed was the change in Civil Service regulations in reference to qualifications for personnel supervising ranges both in the BLM and the Forest Service.

This problem was first given close scrutiny at the American National Cattleman's Association meeting at Phoenix and again at the National Wool Growers meeting in Las Vegas. Action

was demanded by both groups requesting the Department of Agriculture and the Department of Interior to institute a training program to educate personnel for administrative positions along the lines of sound livestock management. Council members unanimously felt that such training or background in livestock management is essential in providing the most efficient service to the public and to the stockmen.

—Julian Arrien, President
Oregon Wool Growers Association

LAMB GRADING CHANGES WILL AID FEEDER SALES

CHANGE in lamb grading means improvement in feeder sales for the fall of 1957. The combined effort of various sheep raisers' associations for a change in Federal grading of lambs has been the most outstanding factor in the improvement of prices for lambs moving out of Imperial Valley. These new standards became effective February 11, 1957, and have been under consideration for some time especially during the last 18 months. There have been discussions and demonstrations at many meetings

and with all the segments of the industry.

The five grades for lamb, Prime, Choice, Good, Utility, and Cull have been retained, but the actual grading standards for the first three grades have effected a more acceptable carcass in the interest of the consuming public and of particular value to lamb feeders who finish the milk lambs not ready for market either in feed lots or in pasture. This is not a lowering of quality, but a grading that permits older lambs finished in dry lots and in pasture to be classed in the Prime and Choice grade.

This is particularly valuable to lamb growers as well as to the many feeders who purchase these lambs, and I know of nothing in recent years that has contributed more to the price the feeder could pay than this change in grading. At the same time, it will in no way affect the choiceness of the commodity which the housewife will buy at her local meat vendor. The consuming public today is demanding a well-marbled, tender and palatable piece of meat which does not carry too much fat, and it is evident that this change in grading will be of value to everybody.

(Continued on page 26.)



Sheep Industry Film Being Produced

LOOKING over the 20-minute color film "Nature's Golden Fleece" at the Ogden, Utah, Intermountain Regional Forest Service offices in February were representatives of the Intermountain sheep industry. This excellent film was carefully previewed by these sheep industry leaders before it was sent to Hollywood to have the narrative and other sound placed on it. Talking over the script and film (taken by the Forest Service in the four Intermountain States) were, left to right, Roscoe J. Rich of the R. C. Rich Sheep Company, on whose summer range near Burley, Idaho, much of the film was taken; J. R. Broadbent, president of the Utah Wool Growers Association; C. J. (Chet) Olsen, retiring chief regional forester of the Intermountain Region; Tony Smith, president of the Nevada Wool Growers Association; Leonard W. Hay, past president of the Wyoming Wool Growers Association; James A. Hooper, secretary of the Utah Wool Growers Association; Howard Flitner, president of the Wyoming Wool Growers Association; and Andrew D. Little, president of the Idaho Wool Growers Association. The Idaho, Nevada, Utah and Wyoming Wool Growers Associations and several Government branches co-sponsored the film which will be shown at various meetings, schools, and before the numerous groups who annually request such movies.

FROM STATE PRESIDENTS

(Continued from page 25.)

In the interest of range herds as well as purebred breeders, the number of ram sales can be reduced. In view of this situation, the Utah Wool Growers, the Utah Registered Sheep Breeders Association, and the Utah State Ram Sale have under consideration the consolidation of ram sales. This will permit a breeder to reduce his cost of traveling and showing and the range-man who wants bucks to secure the same at a much improved and streamlined sale through the consolidation of ram sales. It is felt by the Utah Wool Growers that this will naturally im-

prove the availability of securing good rams without excessive travel, and they expect to announce such consolidation very shortly.

—J. R. Broadbent, President
Utah Wool Growers Association

SOUTH DAKOTA RANGES BENEFITED BY SNOWS

WE will have our spring executive meeting the first part of April.

Our ASPC Director Matt Hafner of Newell has recently returned from the Council's meeting in Denver, Colorado. He thought the work was going forward satisfactorily.

R. A. Smiley, our vice president, was called on to address the cooperative wool growers' meeting here in Belle Fourche. He gave a very good outline of the beginning, the purpose, and the work of the Western South Dakota Sheep Growers. It is gratifying to note we are steadily increasing our membership.

Sheep in this area have wintered fairly well. We have been getting some light skiffs of snow, which have been beneficial to the range grazing.

Some farm flocks are lambing at this time. They are getting a good percentage of lambs.

—Henry Wahlfeldt, President
Western South Dakota Sheep
Growers Association

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NWGA MEETINGS

Legislative Committee

THE Legislative Committee of the National Wool Growers Association met at its Salt Lake office on Thursday, February 28. They spent the entire day discussing pending Congressional legislation and also some measures that might come up later. Executive Secretary Marsh was authorized to go to Washington to participate in a conference with the immigration officials and the representatives of the California Range Association on March 7 on new sheepherder importations. Secretary Marsh was also directed to line up the presentation to be made at the hearings opening on March 18 by the Senate Committee of Agriculture on deferred grazing legislation.

Mr. Marsh was expected to contact various Government bureaus and agents that administer the affairs in which the sheep industry is vitally interested.

Attending the Legislative Committee meeting were W. H. Steiwer of Oregon, Andrew D. Little of Idaho and R. W. Hodge of Texas who substituted for Penrose Metcalfe, and Executive Secretary Marsh. President Don Clyde presided at the meeting.

Officers in Denver

NWGA Vice Presidents Harold Josendal of Wyoming, Angus McIntosh of Colorado, Penrose B. Metcalfe of Texas, David Little of Idaho and W. Hugh Baber of California met with President Don Clyde at a dinner meeting in Denver on March 11, following the delegate meeting of the American Sheep Producers Council.

Current Association problems, particularly the Washington work occupied the attention of the group during the three-hour meeting.

The National Wool Grower

SHEEP DISEASE INFORMATION—THE FIFTH IN A SERIES

BLUETONGUE

by D. G. McKERCHER, B. R. McCrory,
and J. L. HOURRIGAN*

BLUETONGUE, or catarrhal fever, is a virus disease of sheep. Typical symptoms are fever, depression, and lack of appetite. Inflammation and ulceration of the mucous membranes of the nasal cavity, mouth, and the tongue may occur. The tongue may sometimes be swollen and cyanotic (bluish).

The acute phase is relatively short, but recovery may take a long time and may be marked by lameness, debility, and extreme emaciation. A "break" in the staple lowers the value of the wool. The fleece is sometimes shed. The mortality occasionally is high but usually does not exceed 15 percent of the affected animals in an outbreak. Because of loss of condition, long convalescence, interruption of breeding schedules, and lower value of the wool, however, the indirect economic losses from bluetongue are considerably greater than those suffered directly in terms of actual deaths.

Bluetongue has been serious in some countries for many years but is relatively new to the United States. For a long time it apparently was confined to the Union of South Africa and other parts of Africa. It has been studied extensively in the Government Veterinary Research Laboratories at Onderstepoort, Union of South Africa. The disease was reported on Cyprus in 1943 and later in Israel. It has been reported, without confirmation, in Palestine, Turkey, and Syria.

The presence of bluetongue in the United States was suspected in 1948 and confirmed in 1952 on the basis of studies by American and South African investigators, who could not find out, however, how it was introduced or when. Its presence in Arizona, California, Colorado, Kansas, Missouri, and Texas has been verified, and it was diagnosed clinically in Montana, Nebraska, New Mexico, Oklahoma, and Utah. Suspected outbreaks were reported in Idaho, Indiana, Oregon, and Wyoming in 1954 and 1955.

All breeds of sheep are susceptible to bluetongue, but severity of infection depends on several factors.

Certain breeds are less susceptible than others. In South Africa the native Afrikaner and Persian breeds are considered quite resistant; the Merino is less so; and the Dorset Horn and other British breeds display little natural resistance. The susceptibility of individuals in each breed also seems to vary.

Another factor is the strain of the virus. Some strains

produce relatively mild infections irrespective of breed; others regularly give rise to a severe form of the disease.

Age is a factor. Sheep about one year old are most susceptible. Lambs of susceptible ewes suffer a much milder form of the disease, possibly because of the natural resistance of youth. Lambs of dams that have recovered from the disease have a passive immunity, which gives a measure of protection for two months or more after birth.

Environmental circumstances also have a part: Sheep born and bred in an area where bluetongue exists are more resistant than those introduced from a place where the disease is less prevalent or absent.

Bluetongue is seasonal. (Very likely insects transmit it.) It is more prevalent during wet years and occurs mainly in low-lying localities, although conditions suitable for the vector, rather than the absolute elevation, may be the critical factor. The disease usually begins in early June and ends abruptly with the first severe frosts. Its onset and duration, therefore, vary for different areas of the country. The peak of the disease coincides generally with the period of greatest insect activity in any particular area.

The filterable virus that causes bluetongue is present in the blood, blood serum, organs of circulation, and tissue fluids of the infected sheep. Sheep are regarded as the natural hosts. The virus is also found in cattle, but in cattle the clinical manifestations of disease are negligible or absent.

Infant mice, hamsters, and chicken embryos can be infected by experimental inoculation.

The bluetongue virus can remain viable in decomposed blood and tissues for long periods. In suitable storage it retains its viability for years.

A number of strains of bluetongue virus exist. Most of them differ in virulence. Thus, in fully susceptible sheep, some strains—the virulent strains—regularly produce a severe form of bluetongue, whereas others—of low virulence—give rise to a relatively mild infection.

When a strain of low virulence is passed from sheep to sheep by injection, the virus tends to become weaker and eventually loses its capacity to produce a recognizable clinical infection. The virulent strains retain full power to cause disease when they are passed in this way. When passed through a succession of chicken embryos, however, strains of high and low virulence alike lose their ability to cause bluetongue in susceptible sheep. The weakened virus is then said to be "modified" or "attenuated." Such viruses are used to protect or immunize against their fully virulent counterparts.

Of utmost importance in vaccinating and immunizing against bluetongue is that all known strains of the virus are divisible into four distinct groups, or types. Recovery from an attack of bluetongue caused by a strain of one particular type fails to protect the individual against subsequent exposure to a strain of virus belonging to any of the other three types. Type and virulence are unrelated, however, because a mild strain of virus protects against infection with a fully virulent strain of the same type, and vice versa.

*D. C. McKercher is associate professor of veterinary medicine and associate veterinarian in the experiment station of the School of Veterinary Medicine, University of California, in Davis. He holds degrees from the Ontario Veterinary College, in Guelph, Canada; Queens University, Kingston, Canada; and Cornell University.

B. R. McCrory is a veterinarian of the Animal Disease Research Laboratory at Denver, Colorado.

J. L. Hourrigan is head of Special Diseases Eradication Section, Animal Disease Eradication Branch. He received the degree of doctor of veterinary medicine from Kansas State College in 1940 and joined the Department of Agriculture that year.



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The significance of this point is referred to later.

Bluetongue is not a contagious disease. It can be transmitted only by the injection of infectious blood and other virus-containing tissues. The evidence we have strongly suggests that under natural conditions transmission is by a nocturnal bloodsucking insect, or insects, which transfer the blood from diseased to susceptible sheep.

Circumstantial evidence originally implicated the mosquito as the insect carrier, but investigations have not proved that to be true.

Limited experiments later demonstrated that a night-feeding gnat of the genus *Culicoides* could possibly transmit the infection. It has not been possible to raise these gnats in captivity, however, and research men have been unable to determine whether this gnat might be a biological vector (that is, one in which the virus undergoes multiplication) or merely a mechanical vector of the virus. In any event, we think it is highly significant that these gnats are found wherever bluetongue occurs in the United States, although bluetongue does not necessarily occur where these gnats abound.

Of equal importance is the manner in which the virus is maintained from one bluetongue season to the next. The disease does not occur in late fall, winter, and early spring, a period of about 6 months; yet, as far as we know, the virus does not persist for longer than 4 months in recovered sheep. These two points can be reconciled only on the premise that the virus is maintained from year to year in a host other than sheep.

Although species of the *Culicoides* gnat can harbor the virus, that the gnats normally maintain the virus is considered highly improbable. Much more likely is that some vertebrate species is involved from which the insect obtains the virus before the beginning of each bluetongue season. The fact that cattle harbor the virus for variable periods while showing little or no evidence of clinical infection might therefore be significant.

In sheep into which the virus is injected experimentally the disease appears usually 6 to 9 days after the injection. The time required for the disease to develop naturally has not been determined but is believed also to be about 6 to 9 days.

Rarely will all the signs of the disease be observed in any one sheep or even in any one outbreak. A definite pattern of symptoms may predominate in one flock, but another set of symptoms may be found in an outbreak nearby. Likewise the morbidity and mortality vary greatly. Sheep may occasionally contract the disease and experience only a

febrile (feverish) reaction. Others may display the typical clinical symptoms and have no fever.

The early stage of the disease is characterized in most cases only by a temperature, which ranges from 104° to 106° or even higher. The fever begins to subside after three or four days, and clinical symptoms appear.

The first symptoms consist of a flushing of the skin over the sternum, inside the thighs and forelimbs, and sometimes over the shoulders, ribs, and flanks; swelling of the lips and tongue; and reddening of the mucous membranes of the mouth and nasal cavity. A watery discharge and an excessive amount of salivary secretion, often stringy, also are observed. The nasal discharge soon becomes quite thick, dries on the nostrils, and forms encrustations, which leave a raw, bleeding, underlying surface when removed.

In many cases the swelling of the lips extends to the ears and muzzle, and less frequently to the neck and sternum. The ears become hot and pendulous. The lower part of the head looks swollen. Affected animals show variable degrees of depression. The appetite is diminished or absent. Breathing and the pulse rate speed up. The animals lie down much of the time.

Parts of the mucous membranes of the mouth and tongue may slough, leaving bleeding areas.

The tongue may be greatly swollen and bluish and protrude from the

1957 SHEEPMEN'S CALENDAR

National Association Events

August 14-15: National Ram Sale, Ogden, Utah.
August 16-17: Midsummer Meetings, NWGA Executive Committee and AWC Council of Directors, Ogden, Utah.
January * 1958: National Wool Growers' Convention, Salt Lake City, Utah.

Conventions and Meetings

June 24-25: Columbia Sheep Breeders of America, Flathead Lake, Montana.
July 23-25: Colorado Wool Growers' Convention, Grand Junction, Colo.
August 6-8: Wyoming Wool Growers' Convention, Casper, Wyoming.
August 6-8: California Wool Growers' Convention, Stockton, California.
August 16-17: Midsummer Meetings, NWGA Executive Committee and AWC Council of Directors.
January * 1958: National Wool Growers' Convention, Salt Lake City, Utah.

Sales

April 29-30: California Ram Sale, Sacramento, Calif.
August 7: Idaho State Ram Sale, Filer, Idaho.
August 14-15: National Ram Sale, Ogden, Utah.
September 6-7: Utah State Suffolk Sheep Show and Sale, Nephi, Utah.
September 14: Idaho Fall Range Ram Sale, Pocatello, Idaho.
September 19: Montana Ram Sale, Miles City, Montana.
September 24-25: Wyoming Ram Sale, Casper, Wyoming.
September 26: National Columbia Sheep Sale, Chillicothe, Missouri.
October 11-12: Utah State Ram Sale, Spanish Fork, Utah.

Shows

June 5-6: Intermountain Junior Fat Stock Show, North Salt Lake, Utah.
November 15-20: Golden Spike National L. S. Show, Ogden, Utah.
*Dates to be announced later.

mouth, so that breathing is difficult. Necrotic ulcers often are observed in severe cases on the sides of the fixed part of the tongue. Sometimes raw sores develop on the muzzle and in the nasal passages. Animals that develop pneumonia as a sequel to the febrile reaction breathe with great difficulty, and the saliva becomes frothy and sometimes tinged with blood. These cases usually die.

The flushing of the skin results ultimately in the formation of localized areas of dermatitis and is associated with the development of a bluish-red or purplish band at the coronet (skin margin of the hoof), which moves down with the growth of horn. This inflammatory process is believed to account for the lameness that often occurs. This band is not observed in all naturally occurring cases of the disease, however, and is seldom observed in animals that are infected experimentally.

Most deaths occur during or shortly after the acute stage. A few deaths occur just afterwards; they usually are due to secondary pneumonia. Most of the other animals recover in a relatively short time, but some develop emaciation, weakness, stiffness, and lameness. Sometimes the fleece is shed. In some cases the head is held to one side—a condition that is known as torticollis or wryneck. It is caused by a muscular weakness resulting from the degeneration (wasting) of the neck muscles. Such animals, which survive a long period of convalescence, rarely if ever regain their former condition and are of little economic value.

Most of the tissue damage in bluetongue is apparent in the living sheep and includes swelling of the ears and lower head; inflammation and ulceration of the mucous membranes of the nasal cavity, mouth, and tongue; localized inflammation of the skin; the presence of a purplish band around the coronets; and a wasting of the muscles.

Less striking internal changes are observed at autopsy. These include hemorrhage in the form of dark-red, gelatinous areas, which look like bruises. They usually are found in the tissues under the skin and often extend into the muscles of the back, shoulders, and neck.

Degeneration appears as whitish areas of various sizes throughout the skeletal muscles. Pneumonia is present to a variable degree in many cases but is not regarded as being characteristic of bluetongue. Changes visible only by microscopic examination of affected tissues include capillary hemorrhage and the degenerative process in the individual muscle fibers.

Once the presence of bluetongue has been established in an area, a diagnosis can be made with reasonable confidence

on a strictly clinical basis. However, clinically diagnosed or suspected cases of the disease in an area presumably free of bluetongue should always be confirmed by laboratory studies.

Conditions occurring in the United States that are most likely to be confused with bluetongue are contagious ecthyma (soremouth) and photosensitization (big head). The following details will help one tell them apart.

Contagious ecthyma occurs mainly in lambs and is characterized by the formation of vesicles—blisters—on the lips and tongue, which ulcerate, leaving granulating sores. Vesicles on the lips

become encrusted with thick, grayish-brown scabs. After some time the scabs drop off and the lesions heal, leaving no scars. Rarely is the disease accompanied by fever or depression, which is so common in bluetongue.

Photosensitization occurs only in white-faced sheep. There may be considerable depression, but muscular stiffness and oral lesions are absent. (The term refers to the process whereby something becomes sensitive to light.)

Because insects probably transmit bluetongue, efforts to eradicate or restrict the spread of the disease by regulatory measures would appear to be

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futile. Attempts to control it by means of insecticidal dips and sprays likewise are impracticable under most conditions of sheep raising in this country and appear to be of little value.

Treatment is useless, although the disease can be made less severe by protecting affected animals from direct sunlight.

Bluetongue can be prevented by vaccination procedures, which were developed by scientists in South Africa.

The original vaccine used in that country consisted of a mild strain of virus, which was further weakened by successive passage in sheep. That vaccine was dangerous, however, because occasionally it produced clinical bluetongue in highly susceptible animals. Another disadvantage was that the vaccine afforded protection against only the same type of virus. The subsequent attenuation of the bluetongue virus by serial passage in chicken embryos made it possible to develop a modified live-virus vaccine containing the four known virus types. It has given excellent results.

In the United States a similar vaccine is available. It contains the only type of bluetongue virus known to exist in this country in 1956. It is recommended that vaccination be carried out well before the onset of the bluetongue season. It may be resorted to in the face of an outbreak, however, because the development of new cases can be arrested in nonvaccinated flocks within several days.

Ewes should be vaccinated before breeding, but if that is impracticable it may be safely done during late pregnancy. While a high incidence of weak and abnormal lambs results when vaccination is done during the first six or eight weeks of gestation, limited field observations seem to indicate that the adverse effects do not occur when vaccination is done before breeding or during the fourth or fifth month of pregnancy.

The earliest age at which lambs can be vaccinated and develop a satisfactory immunity has not been definitely established, but available information indicates three to four months of age.

Occasionally reactions occur after vaccination. These are manifested by fever, mild depression, and a reluctance to feed about a week after vaccination. The affected animals will return to normal, however, in 24 to 36 hours. The severity of the reactions conceivably may be minimized by affording protection against direct sunlight during that time.



by JERRY SOTOLA
Associate Director, Livestock Bureau
Armour and Company, Chicago, Illinois

Speech made before the 92nd annual
NWGA convention, Las Vegas, Nevada,
January 23, 1957.

(Editor's Note: This is Part Two of
the speech delivered by Mr. Sotola. The
conclusion will be carried in the May
NATIONAL WOOL GROWER.

WIDE use of antibiotics to prevent bacterial spoilage of meat, milk and eggs in transit to the consumer is becoming a reality. Tests are under way to determine whether feeding high levels of antibiotics before slaughter will result in increased keeping time for meat.

Antibiotics boost animal growth in four ways:

1. By suppression of germs causing diseases usually too mild to be recognized as diseases, but severe enough to depress the animal's growth rate.
2. Encouragement of organisms which synthesize vitamins in the intestinal tract.
3. Suppression of intestinal germs which compete with the animal for vitamins in the food.
4. Thinning of the intestinal walls of antibiotic-fed animals, permitting better absorption of vitamins and other nutrients.

High-level antibiotic use in lambs has been an aid in reducing losses from respiratory and enteric infections. Use of antibiotics in feed or water is recommended for pneumonia, infectious scours, shipping fever, and intestinal diseases. Such use of antibiotics is not a substitute for a sound sanitation and management program.

Antibiotic feeding may have some favorable effect on breeding and reproduction. By encouraging more rapid growth rate it tends to encourage attainment of sexual maturity at a slightly earlier age.

With fattening lambs the use of antibiotics has given negative results in Utah, Wyoming, Oregon and Texas.

Best responses to antibiotics are ob-

Livestock Nutritional News

Antibiotics Boost Animal Growth in Four Ways

tained when the animals are under stress or when the ration is inadequate.

Pelleting Feeds

Sixty percent of manufactured poultry feeds are fed in the form of pellets or crumbles. Faster growth rate is obtained and feed efficiency is improved.

Increased density of the pellets is credited with the favorable response—it increases feed intake. A chemical change in the pellets is indicated—with a reduction in growth inhibitors.

At New Mexico pellets made from coarse stemming, poor colored alfalfa hay and a concentrate of sorghum grain and molasses were of equal value to hand-fed good grade alfalfa hay and sorghum grain. They saved 313 pounds of hay and 17 pounds of concentrate per 100 pounds gain by pelleting.

At Kansas, pelleting saved 150 to 160 pounds of feed per 100 pounds gain, consisting of 65 percent alfalfa hay and 35 percent corn.

Pelleting reduces the moisture content of the feed. Sheep seem to utilize the carotene better from pelleted feeds. (1.8 to 1.3 times better).

Increased palatability and reduced water are factors. Also, lambs can be started on full feed quicker. The pelleted ration should be self-fed.

Dynafac Compound

Dynafac is a chemobiotic growth promotant and an anti-scur agent. It has a pungent odor and each pound contains 20 percent tetra alkylammonium stearate and 80 percent steamed bone meal and soybean meal. This compound is stable, inhibits growth of Gram positive and Gram negative bacteria and has an activity against fungi.

The mode of action has not been proven, but there is evidence that in the digestive tract it functions like broad spectrum antibiotics. It alters the bacterial flora by depressing multiplication of undesirable bacteria.

For growth of lambs and sheep 9/10 to 1 gram of Dynafac per head per day is recommended. It increases gains 10 to 15 percent. In lamb feeding it increases gains and results in improved feed efficiency. It is economical and non-toxic.

Frequency of Feeding

The frequency of feeding appears to have a greater effect on the efficiency of feed utilization than most people have expected. Gordon and Tribe fed sheep 1 pound of chopped hay and 1½ pounds of a concentrate mixture daily. One group was given the entire mixture in the morning and a second group was given ½ of the ration at about hourly intervals for eight hours. The first group of 11 gained 18 pounds during the nine weeks while the second group gained 96 pounds. The groups were reversed and during the next nine weeks the single fed group gained only 33 pounds, while the multiple fed group gained 151 pounds.

Roughage-Concentrate Ratio

Cox in 1948 reported a ration of 45 percent concentrate and 55 percent roughage produced a greater rate of gain and feed efficiency than rations of 55 percent concentrate and 45 percent roughage, or 35 percent concentrate and 65 percent roughage. A 1952 to '54 test in Idaho reported the most economical ratio of concentrate to roughage ranged from two parts concentrate and one part roughage to one part concentrate and two parts roughage.

At the Utah Agricultural Experiment Station they tried .83 mgs. (miligrams) and 1.67 mgs. of stilbestrol per pound of feed—the rate of gain was increased significantly at the high level of stilbestrol. Feed required per 100 pounds of gain was inversely related to the amount of stilbestrol fed. There was no significant difference in the carcass grades. Dressing percentage was significantly decreased by treatment with a high level of stilbestrol.

There were highly significant breed differences in grease wool weight, clean wool weight and staple length. No significant differences were caused by stilbestrol, terramycin nor the ratios of roughage to concentrate on the weight or length of the wool. Ante-mortem examination of lambs showed an enlarged mammary system in both groups of stilbestrol treated lambs. Post-mortem examination of the accessory sex glands indicated direct relationship existed between the Cowper's gland size and the amount of stilbestrol fed to the treated lambs.

How Stilbestrol Works

Stilbestrol stimulates the adrenal glands which results in a larger production of antigen. This antigen favors nitrogen metabolism so that the animals become more efficient in the utilization of the protein of their ration.

Phenothiazine Drenching

At the Oregon Experiment Station it was found that drenching feeder lambs once with 25 grams of phenothiazine suspension in conjunction with feeding a grain mix pellet containing 25 mgs. per pound of aureomycin resulted in significantly increased gains over untreated lambs.

Adding Fat to Ration

At the Iowa Agricultural Experiment Station studies were made on the effect of added fat on the digestibility of lamb rations. Fats with three different melting points were added separately to a standard lamb fattening ration to determine the digestibility of the fat and the effect of fat on the digestibility of dry matter of the ration. The fats used were corn oil, prime tallow and hydrogenated animal fat. All fats were added at the 0, 4, 8 and 12 percent level in the ration. The added fat replaced an equal amount of corn in the ration. The 4 percent addition of any of the three fats appeared to have little if any effect upon the digestibility of the dry matter. The two higher levels markedly reduced the dry matter digestibility. When feed and feces were corrected for fat content, the corn oil had the most detrimental effect upon digestibility of the dry matter other than fat. The apparent digestibilities of the fats when fed at the 12 percent were tallow 92 percent, corn oil 80 percent, and hydrogenated animal fat 64 percent.

The rate of growth of rumen microorganisms is determined by the rate of protein synthesis or cellulose digestion. It is directly proportional to the potentially available ammonia nitrogen.

Feather Meal for Lambs

At the University of Minnesota they tested the value of feather meal in comparison to soybean meal as protein supplements for fattening lambs. The basal ration of the lambs consisted of a full feed of shell corn, low quality broom hay, salt and a mixture of limestone and trace mineral salts. The supplement of one of the groups of lambs contained 200 pounds of ground corn, 100 pounds of ground feathers and 100 pounds of soybean meal. The feather meal did not adversely affect the palatability of the ration. The lambs in that lot made a gain of .47 pound, whereas the checked lambs gained .38 pound.

Urea for Lambs

At Michigan State University they studied the utilization of urea and biuret (a crystalline compound formed by heating urea) as sources of nitrogen for growing and fattening lambs. The basal ration consisted of ground wheat straw, ground corn, molasses, dehydrated alfalfa meal, trace mineralized



This man is looking into your future

How does it look? Rosy? Free of cancer? You hope! But hoping isn't enough. Of every 6 Americans who get cancer this year, 3 will die because science still has no cure for them. It will take research . . . lots of research . . . to find that cure. And research, let's face it, takes money. Pitch in and help. Send a generous check . . . right now . . . to "Cancer" in care of your local Post Office.

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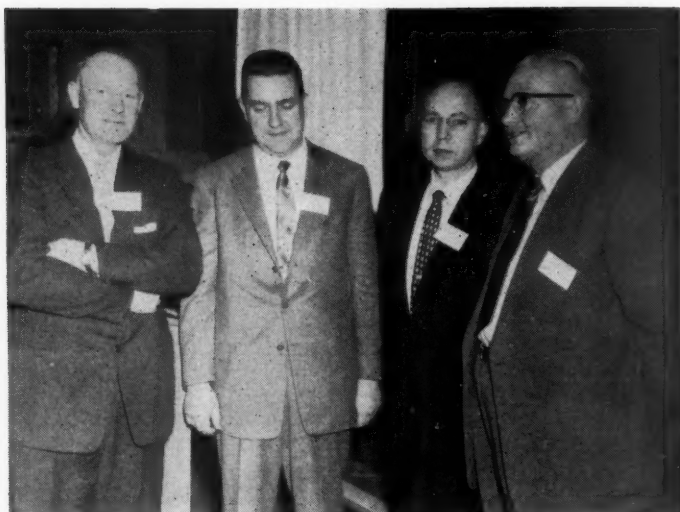
salt and high calcium phosphate. They added either urea, biuret or crude biuret, or replaced part of the corn with soybean oil meal, and by these changes were able to increase the gains of the lambs. No significant differences were noted among the lots fed the various supplemental nitrogen sources. Under the condition of their experiments urea, biuret and crude biuret were satisfactory sources of supplemental nitrogen for growing fattening lambs. Biuret appears to be less toxic than urea when fed at higher levels.

At the University of Tennessee they discovered that urea feeding had no noticeable effect on the retention of calcium, phosphorus or nitrogen of fattening lambs.

These results show that urea can be used as a protein substitute.

Less Satisfactory for Sheep

For some unknown reason urea is generally a less satisfactory protein substitute for sheep than for dairy cows or for beef cattle. However, a low protein ration for sheep will be improved somewhat by the addition of urea. Several metabolism experiments have proved that under proper conditions sheep can use urea as a partial substitute for protein but in most such studies urea has not equalled the protein supplement.



NWGA Photo

Speakers discussing sheep feeding at the Utah Feed Manufacturers and Dealers Association convention were (from left to right): Allan Jenkins, Newton, Utah; Dr. C. F. Chappel, Eli Lilly Company, Indianapolis, Ind.; Dr. E. E. Rice, Swift and Company, Chicago; and Russell R. Keetch, USAC, Logan, Utah.

Range Feeding and Management To Increase the Lamb Crop

by RUSSELL R. KEETCH
Extension Service,
Utah State University

(Editor's Note: This speech was delivered at the eighth annual Utah Manufacturers and Dealers Association Convention and Nutritional Conference on the Brigham Young University campus in Provo, Utah on February 14.)

DURING the past 30 years, the sheep industry has shown marked changes. Modern transportation and road systems make it possible for the rancher to keep closer supervision of his management and feeding operations. Sheep of today also require more feed than those of 50 years ago, due to the increase in size and quality of animals. They produce more meat and wool. Someone has estimated this increase at 50 percent.

Range sheep need daily attention, especially during the periods of breeding, lambing and wintering. However, the principles of management and feeding are relatively simple. Fortunately sheep are the easiest class of livestock to feed. They are the only animals which will provide a prime carcass on grass alone. Nature designed the sheep for forage consumption and under a profitable sheep production set-up it is essential that they get most of their feed from this source.

If sheep are kept on ranges which do not provide forage, then there is need for proper supplements. Nothing fancy is required for good sheep nutrition. The common grains and mill feeds will do the job.

When feeds are low in protein, a supplement with high protein content is needed like grass range in wintertime. When lots of browse is available perhaps some grain concentrates are required and in areas where minerals are in short supply, the supplement should contain minerals.

Dr. Lorin Harris of the Utah Experiment Station says that practical feeding includes consideration of the condition of the sheep, the amount and the kind of forage on the range, and the climatic conditions. These items will then determine the kind and amount of supplement to feed. Dr. Harris says also, "Supplements should usually be of five kinds: high protein pellets, or cotton seed meal and salt; medium protein pellets; low protein pellets or corn; alfalfa hay, and mineral supplements."

Requirements for the range ewe vary. She needs different amounts of nutrients at various stages of her production cycle, before breeding, early pregnancy, late pregnancy, early lactation and late lactation. Her requirements also depend on such items as disease, parasites and climatic conditions.

Besides this, the nutritive value of range forage varies with the state of maturity, range and climatic conditions, and soil factors. Then too often management for maximum production does not always yield maximum net returns.

A South Dakota study on winter feeding and summer grazing traits with range ewes indicates:

1. Winter range forage is deficient in both protein and energy for maximum ewe production.

2. If fed at the same level, a 40 percent protein supplement is superior to one of 20 percent for wintering bred ewes on the range.

3. Summer grazing management and level of winter supplementation are both important factors in ewe production. Level of winter supplementation is most critical when the ewes are grazed on a poor summer range. The condition of the summer range is most critical when ewes are poorly fed during the winter. Maximum ewe production is achieved with a high level of winter feeding and an excellent summer range.

4. Maximum net returns may be achieved in some years by a high level of supplementation, in others by a lower level. This depends upon lamb, wool and salvage ewe prices; feed costs; and climatic conditions. However, well-grown, vigorous high producing ewes may have better living, possibility of a longer productive life and a higher resale value.

Breeding Season:

In Utah the breeding season on the range commences about the middle of November for those operators equipped with lambing sheds. The first of December is early enough for those who lamb out on the range in May. The general practice in range breeding is to use three rams for 100 ewes. Rams should be conditioned before placing in the herd. Some operators have found it a good practice to put in two-thirds of their rams in the herd at the beginning of breeding periods; then in about two weeks to place in the other fresh group. The plan is to get the maximum ewes bred in a short period. Range breeding is hard on rams. They should be removed when breeding season is over and placed on a good alfalfa ration usually at ranch headquarters.

Ewes should be in a good thrifty condition with a slight gain in weight at breeding time. They should not be bred when trailing. Usually a rest with the best range feed available for about two weeks should be sufficient to flush the ewes and put them in good condition for breeding. The overall condition of the ewes and the rams at breeding time will be reflected in the length of the lambing period. The total lamb

crop should be dropped in 30 to 35-day periods.

Results of work at Utah Experiment Station at Cedar City in 1956 indicated that 89.6 percent of the lambing ewes lambed during the first 16 days. This was the result of testing rams for fertility and breeding the ewes when on green feed.

Production per ewe has been increased on the experimental range herd at Cedar City. Figures show 49 pounds of lamb per ewe in 1945 to 104 pounds in 1949. Percent of lambs born in 1945 was about 89 percent; in 1950, 150 percent with the results attributed to management, feeding and selection.

Montana Experiment Station uncovered a rather interesting sidelight to the breeding of range ewes. Three groups of ewes were left together for feeding and breeding. After breeding each of the three groups were given different feeds. (A) group was given no supplemental feed, just the range feeds. (B) group was fed one-third pound in four different amounts of protein (10 percent to 40 percent protein in pellets). Group (C) full feed of mixed and alfalfa hay plus two-thirds of pellet (20 percent).

The results were not conclusive but interesting as:

1. The lamb production from ewes which were bred in same group but fed greater amounts of feed after breeding was different.
 2. The ewes in the group receiving the most feed had 37 percent more lambs than those receiving range feed only.
 3. There were 15 percent more dry ewes in the group on the lowest level of feed.
 4. There were more twins born in the group on the highest levels of feed.
 5. There was a greater difference in the reaction of the two-year-old ewes to the levels of feeding. (The difference in two-year-old dries was 33 percent.)
 6. It appears that ewes responded to higher levels of feeding after breeding as well as before and during breeding.
- Another Montana Experiment of flushing vs. non-flushing of ewes indicated 2.5 percent fewer dry ewes when flushed in comparison with the non-flushed.

Young sheep are more affected by change of weather and feed than the older sheep. The two-year-old ewes require nutrients for growth, maintenance and reproduction.

When environment and feed conditions are good and the dry ewe percentage is low, it might be a good idea to sell three-year-old or older ewes. They are likely to be dry again next year.

Clanton's work on the Utah experi-

mental study of nutrition management (1954-55) shows:

All ewes in experimental herd lost weight the fore-part of the winter and gained weight the latter part. Protein followed by corn and phosphorus in this order, yielded better results in maintaining body weight than range forage only. Those fed all season maintained body weight better than those fed in late winter and spring. The old ewes and lambs did not maintain their weight, as well as the middle-aged and young ewes.

Supplemental groups gave birth to heavier lambs than those not supplemented. However, this did not carry over through the weaning weight. Old ewes produced the most lambs but did not wean as many pounds of lamb as the middle-aged group. The two-year-old ewes were the poorest producers and mothers.

A Montana study of production of two-year-old range ewes indicated:

1. Ewes gained more body weight as the protein content of the supplemental pellet increased. When fed at rate of one-third pound per day.
2. This advantage in weight gain did not increase the production of lamb and wool above a group which received 11 percent protein pellet.
3. A band which had hay all winter then was fed a concentrate the last 30 days before lambing returned the most profit. Feeding concentrate the entire winter period did not significantly increase the lamb production.
4. Two-year-old ewes wintered on hay produced considerably more lambs than those wintered on the range.

A study of carotene of plants growing on Red Desert sheep range in Wyoming found that the carotene content of the plant did not differ greatly between the two years studied. Browse plants contain substantially the same amount of carotene in November and April. Grass samples contained a low level of carotene in November and 30 to 50 percent less in April. The samples tested, with the exception of the grasses, contained sufficiently high levels of carotene to meet the nutritional requirements of pregnant range ewes.

Hauling of water to range sheep is recognized by practically all operators to be a very important management practice. A prominent operator a number of years ago said he thought "it was better to haul water than it was to haul feed under a good many of our range situations."

Shed Lambing:

In some areas of Utah shed-lambing is considered a necessity, because the percent of lamb crop produced under

range lambing is too low. Shed-lambing has about doubled the lamb production in many herds. Some operators report they would have been out of the sheep business years ago if they had not shifted over to shed-lambing.

Shed-lambing ewes are generally fed for a short period before lambing and all during the lambing period. In most instances the flock is fed until grass is available. In the best managed herds both grain and hay are fed. After lambing more grain is fed in order to help the ewes maintain a good level of milk production for the lambs. Ewes with twin lambs are kept separate and given extra feed and attention. Usually the dry ewes are taken into other areas and cared for on a lower plane of attention.

Shed-lambing involves more work than lambing on the range. This practice also involves more expense for feed, sheds, corrals and watering facilities.

During the past six years at the College of Southern Utah in Cedar City a lamb death study has been made to determine as nearly as possible the causes of death.

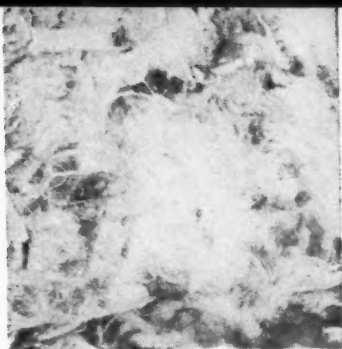
The overall death loss for this period ranged from 12.61 percent in 1952 to a low of 8.28 percent due to all causes in 1956. The average death loss was 10.10 percent. These figures include all aborted lambs, decomposed fetuses as well as losses from other causes. Here is the breakdown as to causes:

Starvation—20.28 percent of all dead lambs.
Unknown causes—16.02 percent.
Dirt eating—7.95 percent.
Docking causes—6.21 percent.
Difficult birth—9.49 percent.
Pneumonia or chilled—10.14 percent.
Disease—4.86 percent.
Aborted—10.39 percent.
Accident—3.72 percent.
Other causes—4.88 percent.
Born dead, cause unknown—5.77 percent.

The death loss by age of ewe indicated that two-year-old or younger ewes had the highest number of dead lambs, especially those having twins when 34.19 percent were lost. With those having singles 17.76 percent were lost.

The large loss in lambs from the two-year-old group indicates that considerable work can be done in helping reduce these losses by more careful management at lambing time. This can be done by separating and giving them closer supervision by seeing that lambs get to nurse promptly and by checking frequently all during the period of lambing.

Increasing the efficiency and productivity of the business, rather than increase the size appears to be the popular theme of today.



REPORT: March Wool Market

Contracting Continues; World Market Strong

March 22, 1957

(Sharply higher prices were reported at Australian auctions on March 28.)

THE approach of the general shearing season in western areas naturally brings on a more concerted effort on the part of the topmakers and dealers to lower the market. Comments in eastern trade papers indicate that a price lowering is expected. However, we are happy to note this statement in the March 12 issue of the Daily News Record:

"While all expect to see lower wool prices in the West, the general feeling is that any decline from now on will be slight. It is pointed out that some people lose sight of the fact that the new domestic clip is the only source of supply for this market unless Australian prices stage a sharp decline."

Contracting in the West has continued although this office has not received as many reports as a month ago. If there is a slowing up in contracting, it may be due to one of two reasons or both: the withdrawal of buyers in anticipation of lower prices or the fact that growers know that prices being offered are about 20 cents a clean pound below Australian prices.

The Commodity Credit Corporation did not sell its allotted quota for February, 6.25 million pounds of wool. The fact that the volume of actual sales was lower but that bids were made on large quantities is taken to mean that the CCC is holding to its price line in so far as possible.

The last week of February 959,000 pounds of wool were sold under the competitive bid system. Bids, however, were received on 3,677,000 pounds. For the month as a whole, as we figure it, a total of approximately 3,648,000 pounds was sold while bids were received on 10,915,000 pounds. About 598,000 pounds were sold at schedule prices (loan appraisal values plus commissions.)

The first week of March under the competitive bid program 289,000 pounds were sold; bids were made on 2,125,000 pounds. Sales at schedule prices amounted to about 8,000 pounds.

Sales totaled 520,000 pounds the week of March 14 with bids on 2,069,000 pounds. Sales at schedule prices covered about 2,000 pounds.

The stockpile was reduced by sales of approximately 779,000 pounds the third week in March. Bids were received on about 3,059,000 pounds.

From \$1.60 to \$1.62, before discount, was the range on 89,000 pounds of fine, staple and good French, graded territory wools the first week; the second week 12,000 pounds of this type went at \$1.60, and \$1.601 was the top on 23,000 pounds sold the third week.

Prices on 103,000 pounds of quarter blood, staple and good French 48/50s, were reported as \$1.16 to \$1.17, the first week; the second week 32,000 pounds sold at \$1.16 and the third week, 103,000 pounds sold at \$1.16 to \$1.17.

Bids from \$1.423 to \$1.45 took 26,000 pounds of original bag territory, good French and staple, the first week; the second week 389,000 pounds brought \$1.381 to \$1.47. The third week 128,000 pounds of original bag Wyoming and Nevada wools sold at \$1.401 to \$1.421; 45,000 pounds of Colorado, New Mexico, Kansas and Iowa original bag wools brought \$1.36 to \$1.395, and 394,000 original bag Californias sold at \$1.351 to \$1.403.

As of March 21, the stockpile stood at 55,363,000 pounds.

FOREIGN MARKETS:

Australian prices eased somewhat around the middle of the month. It was the first decline since the opening of the present series last fall. The fine

M. C. Claar Congratulated

THIRTY years of service—that's the record of M. C. (Mel) Claar, secretary of the Idaho Wool Growers Association. On March 6, 1927, Mr. Claar took over his job as secretary. At that time, T. C. Bacon was president of the Idaho Association. Since then, Secretary Claar has served under 11 presidents.

In a tribute to Mr. Claar, Andrew D. Little, president of the Idaho Wool Growers Association, said, "Mel has done an efficient and thorough job of keeping members of the Idaho Association informed on matters important to the sheep industry. . . . We look forward to many more years of Mr. Claar's services as secretary of the Idaho Wool Growers Association."

wools eased about 2½ percent with other wools unchanged. Full clearances were made of all offerings and later auctions were reported firm.

With Japan reported upping her wool importations from Australia by 100,000 bales (about 30 million pounds) for the fiscal year commencing April 1, some market observers are of the opinion that there can not be a very severe drop in Australian prices.

At South African markets good demand and keen competition at mid-month boosted prices somewhat. South American markets were inactive due to the carnival preceding Lent.

There are favorable and unfavorable features in the current market, largely, of course, depending on the view points. World wool consumption in 1956 was believed to be the highest since World War II. On a clean weight, it was estimated that 2,830 million pounds of wool were consumed last year. This is 8 percent above the 1955 figure, 2,614 million clean pounds.

In the U. S. 1956 consumption is estimated at 453 million pounds, clean, or 6 percent above that for 1955. In France, Germany and Japan wool consumption was the highest since the end of the war. Italy, Belgium and Australia also registered considerable increase.

To curtail too much optimism, it is pointed out that in the United States wool consumption in November and December was the lowest for the year. It is of interest to note that all of the gain in consumption in the U. S. was in worsteds as consumption on the woolen system actually fell off slightly.

And, of course, in considering the U. S. textile situation, one cannot forget the keen competition from the synthetics that exists; also, that while foreign raw wool prices may have curtailed somewhat raw wool purchases abroad, imports of wool manufactures are still a very disturbing factor, although the threat of increased duties may have a beneficial effect in keeping them down.

The statement is also made that unseasonable temperatures have curtailed purchases and kept retail inventories high, which might reduce future fabric buying. On the other hand, it is believed that wool stocks in the U. S. are the lowest of record; also it is pointed out that there are no surplus stocks of wool in the world today except in the CCC stockpile. And this supply may be considerably reduced if the Turkey barter deals go through. (See the report from Washington.)

WOOL IMPORTS IN 1956

Imports of dutiable (apparel) wools into the U. S. in 1956 are estimated at 104 million pounds, clean basis. This was about 8 percent below imports in 1955.

WESTERN SALES AND CONTRACTS

ARIZONA:

At the opening of March it was reported that some 500,000 pounds of wool or about half of the amount available had been contracted in Arizona in the price range of 50 to 58 cents. We have had no recent reports from the area.

CALIFORNIA:

San Joaquin wool was being shorn rapidly around the middle of March and much of it was being contracted or sold at 51.30 to 60 cents per pound. Top price was paid for light-shrinking yearling wool. In the Imperial Valley at least 100,000 pounds of reshorn wool was said to be sold at 50 cents and 425 fleeces of full lamb's wool at 55 cents.

COLORADO:

A large clip of wool at Craig, bulking half blood with about 25 percent three-eighths, was reported sold early in the month at 58 cents. About half of the Craig clips had been contracted up to the middle of the month, largely at 52 to 58 cents. A carload of wool was reported sold in northern Colorado at 58½ cents to 60 cents, with current bids (March 15) at 57 cents.

IDAHO:

Up to the middle of March it was estimated that from 3¼ to 3½ million pounds of the 1957 Idaho wool clip had been sold. The Aberdeen wool pool of about 13,000 fleeces sold at 53½ cents. Another wool pool brought 53¾ cents. One large range clip of about 8,000 fleeces was sold at 52½ cents and another range clip of about the same volume brought 54½ cents. A sale of 1,800 fleeces was made at 56½ cents. Other sales were reported made from 49 to 55 cents. In the Emmett district some 10,000 fleeces were said to have been purchased on a scoured basis at \$1.30 to \$1.45.

MONTANA:

Late in February several local pools totaling 38,500 fleeces sold at prices ranging from 54¾ to 60 cents. Around the middle of March 4,100 fleeces in the Deer Lodge area were sold at \$1.55, clean basis, delivered Boston, with the grower paying one-half the core-test expense. This clip is shorn and shipped each year in February and is considered one of the best fine wool clips in the West. It is reported as bringing \$1.28 last year.

Some 39,000 fleeces in a local pool at Big Timber were contracted at 57.63 cents. Two contracts were also made on a total of 3,100 fleeces at 55 cents in the Sweet Grass Hills area. Two other

small contracts were made at 54 cents and one at 53 cents.

NEW MEXICO:

Some 126,000 pounds of New Mexico wools were purchased at the first sale and showing of the year at Roswell on March 14. Prices ranged from 44¼ to 64¾ cents. Most of the wools, however, went from 47 to 53 cents. Clean prices are said to run from \$1.50 to \$1.65 compared to \$1.25 to \$1.30 last year. Similar prices were reported as paid for 168,000 pounds sold in the sealed bid sale at Artesia. A total of 155,000 pounds of New Mexico wools were offered at Roswell but bids were rejected on one clip of about 28,000 pounds.

UTAH:

The Rich County Pool in Utah

brought 52.77 cents. At Jericho a clip made up largely of fine and half blood wools sold at \$1.45, clean, delivered Boston, on a core test. We have also heard of two Utah clips being sold at 53 and 54 cents.

WYOMING:

The Bridger Valley Pool is reported sold at 52½ cents; that of Wind River at 56.78 cents. Big Horn Basin wools were reported moving in a price range of 52½ cents to 58½ cents. From 52½ to 55 cents was reported being paid for small farm and ranch clips. One range clip in northern Wyoming was contracted at 53 cents.

SOUTH DAKOTA:

A March 16 report from Belle Fourche said that 400,000 pounds of
(Continued on page 44.)

DOMESTIC WOOL QUOTATIONS ON THE OPEN MARKET AT BOSTON NOT INCLUDING C.C.C. SALES PRICES

Week Ending March 22, 1957

	CLEAN BASIS		GREASE EQUIVALENTS BASED UPON					
	PRICES	%	ARBITRARY SHRINKAGE PERCENTAGES (3)					
				%		%		%
GRADED TERRITORY WOOLS (1)								
Fine:								
*Gd. Fr. Combing & Staple...	\$1.60—1.65	56	\$.71—.73	59	\$.66—.68	64 \$.58—.59
*Ave. & Gd. Fr. Combing.....	1.50—1.55	55		.68—.70	60		.60—.62	65 .52—.54
*Sh. Fr. Comb. & Clothing....	1.35—1.40	56		.59—.62	61		.53—.55	66 .46—.48
One-half Blood:								
*Gd. Fr. Combing & Staple...	1.50—1.55	51		.74—.76	54		.69—.71	57 .64—.67
*Ave. to Gd. Fr. Combing.....	1.40—1.45	52		.67—.70	55		.63—.65	58 .59—.61
Three-eighths Blood:								
*Gd. Fr. Combing & Staple...	1.30—1.35	48		.68—.70	51		.64—.66	54 .60—.62
*Ave. French Combing.....	1.20—1.25	49		.61—.64	52		.58—.60	55 .54—.56
One-quarter Blood:								
*Gd. Fr. Combing & Staple...	1.20—1.25	46		.65—.68	48		.62—.65	50 .60—.63
*Ave. French Combing.....	1.05—1.10	47		.56—.58	49		.54—.56	51 .52—.54
*Low-quarter Blood:	1.07—1.12	41		.63—.66	43		.61—.64	45 .59—.62
*Common & Braid.....	.98—1.05	40		.59—.63	42		.57—.61	44 .55—.59

ORIGINAL BAG TERRITORY WOOLS (1)

Fine:								
*Gd. Fr. Combing & Staple...	1.50—1.55	57		.64—.67	59		.61—.64	61 .58—.60
*Ave. & Gd. Fr. Combing.....	1.40—1.45	59		.57—.59	61		.56—.57	63 .52—.54

ORIGINAL BAG TEXAS WOOLS (2)

Fine:								
*Gd. Fr. Combing & Staple...	1.60—1.65	54		.74—.76	58		.67—.69	62 .61—.63
*Ave. & Gd. Fr. Combing.....	1.55—1.60	55		.70—.72	59		.64—.66	63 .57—.59
*Sh. Fr. Comb. & Clothing....	1.40—1.45	57		.60—.62	61		.55—.57	65 .49—.51
*8 Months (1" and over).....	1.40—1.45	55		.63—.65	58		.59—.61	61 .55—.57
*Fall (¾" and over).....	1.30—1.35	56		.57—.59	59		.53—.55	62 .49—.51

- (1) Wools grown in the range areas of Washington, Oregon, the intermountain States, including Arizona and New Mexico, and parts of the Dakotas, Nebraska, Kansas and Oklahoma. These wools cover a wide range in shrinkage and color.
- (2) Wools grown in the range areas of Texas, mostly bright in color and moderate in shrinkage except in the panhandle where they are considerably darker in color and heavier in shrinkage.
- (3) In order to assist in estimating greasy wool prices, clean basis, market prices have been converted to grease basis equivalents. Conversions have been made for various shrinkages quoted. Prices determined in this manner are largely nominal.)

*Estimated price. No sale reported.



Report: MARCH LAMB MARKET

Prices Advances Sharply To Reach 1957 High

March 25, 1957

MODERATE receipts of slaughter lambs and advancing wholesale dressed lamb prices were factors influencing sharp price upturns on lambs at all terminal markets. Progressive advances placed March prices at their highest levels since last spring and summer.

Wooled lambs dominated the supply at most points but a moderate volume of shorn lambs was also included along with a sprinkling of early spring lambs.

Choice and prime slaughter lambs sold all the way from \$21 to \$25.25 during March. The top price was paid in Chicago late in the month, although most markets reported \$24 to \$24.50 top prices at month's end. Choice and prime spring slaughter lambs sold from \$22.50 to \$25 at Fort Worth.

Good and choice slaughter lamb prices ranged from \$18 to \$24.50 during March. Spring slaughter lambs of this grade sold from \$23 to \$24.50 at Fort Worth.

Choice and prime dressed carcasses in New York sold from \$41 to \$53, strengthening throughout the month. Good and choice New York dressed lamb carcasses sold from \$41 to \$52, mostly in a \$43 to \$51 price range.

Prices paid for March slaughter ewe offerings were also very strong. A top of \$11 was paid for good and choice slaughter ewes at Chicago. Sale prices ranged from \$6 to \$11 for these ewes.

Cull and utility slaughter ewes sold mostly at from \$6 to \$8, with some sales falling as low as \$3 and some reaching \$8.50.

Limited March sales of feeder lambs were reported. Some good and choice feeder offerings sold as high as \$22.50 at Omaha, with other markets reporting ranges of from \$17.50 (Ogden) to \$21 (Fort Worth).

COUNTRY SALES AND CONTRACTING

CALIFORNIA

Trade sources indicate some 75,000 California spring lambs contracted in San Joaquin Valley for season to date. Prices have ranged mostly from \$23 to \$24 for up to April 20 delivery.

Old crop alfalfa-pastured slaughter lambs with number one and fall shorn pelts sold at \$20. A string of 6,000 head contracted at \$20 for delivery when

fat with pelts ranging from number three to fall shorn.

In the Imperial Valley, 1,200 half-blood to fine wool replacement ewe lambs and yearlings sold early in March at \$24.50 in the wool.

ARIZONA

Some 40,000 spring lambs contracted in Arizona through March for two- to three-week delivery at \$23.50 to \$23.75.

INTERMOUNTAIN AREA

A few loads of choice 100-105-pound Utah wooled slaughter lambs sold for immediate delivery in March at \$21.25. In Idaho, 1,800 head of good slaughter lambs with choice end sold at \$20, with the remaining 1,700 head going to a Utah shearing buyer at \$19.50.

Around 1,000 ewes with lambs at side sold at \$30 per pair, with each extra lamb at \$5 per head, for near April 1 delivery to Idaho. In Wyoming, 3,000 coming yearling stock ewes near 100 pounds moved to California at \$23 per head. Another sizable band of 100 to 110-pound yearling ewes moved at \$22.50 per hundredweight.

COLORADO

Toward the end of March numerous loads of choice fed wooled lambs sold in northern Colorado at \$23.50 to \$24, delivered to Denver. Earlier in the month, similar offerings sold at \$21 to \$22.50.

TEXAS

Early in the month, 1,500 to 2,000 good and choice shorn slaughter lambs with number two to mostly number three pelts sold in southwest Texas at \$18.50 to \$19.50, with some 500 to 700 fresh shorn at \$18, all for immediate delivery.

A 2,500 head string of good and choice wethers shorn March 1, were contracted for delivery April 1 at \$17.50.

A sizable string of blackfaced ewe lambs was contracted on breeder account in west Texas at \$21.50.

Over 15,000 mixed fat and feeder lambs grading good and choice contracted for May delivery at \$18 to \$19 in south central Texas, weights to range upwards from 85 pounds by delivery date.

MONTANA

In the Sidney area 1,100 out of 1,250 ewe lambs sold at \$23 per hundredweight. In the Stanford area, 2,400 blackfaced ewes out of the wool, sold for July delivery at \$22.50 per head. In the Choteau area, 700 two-year-old wooled ewes sold for immediate delivery at \$30 per head. In the Great Falls area, 4,000 head of blackfaced yearling ewes sold for July delivery out of the wool at \$21.75 per head.

WASHINGTON

Some four loads of choice 100- to 110-pound fed shorn Washington old crop lambs with number one pelts sold during March at \$19 to \$19.50, a deck at \$21 for slaughter within the State.

You should avoid having livestock on the market when Kasher killing has been shut down for a Jewish holiday, as demand is greatly reduced and prices received are usually lower. Jewish holidays in April run from the 16th to the 23rd, with no Kasher slaughter being done on the 16, 17, 22 and 23.

Prices and Slaughter This Year and Last

	1957	1956
Total U. S. Inspected		
Slaughter, First Two Months.....	2,424,000	2,492,000
Week Ended.....	March 16	March 17
Slaughter at Major Centers.....	209,250	241,277
Chicago Average Lamb Prices (Wooled):		
Choice and Prime.....	\$23.20	\$21.15
Good and Choice.....	22.45	20.42
New York Av. Western Dressed Lamb Prices:		
Prime, 45-55 pounds.....	44.10	37.00
Choice, 45-55 pounds.....	42.60	37.00

Federally Inspected Slaughter—February

	1957	1956
Cattle	1,488,000	1,484,000
Calves	550,000	586,000
Hogs	4,985,000	5,922,000
Sheep and Lambs.....	1,091,000	1,163,000

"The Livestock and Meat Situation"

Higher Lamb Prices Forecast

A recent issue of "The Livestock and Meat Situation," published by the Agricultural Marketing Service of the U. S. Department of Agriculture advises sheepmen that:

- Sheep and lamb slaughter to date in 1957 has averaged about the same as a year ago.

- Prices have retained a small margin above last year and may continue slightly higher into April or May because total meat supplies are smaller this year.

- Although output of all meat in 1957 will drop below 1956, it will be second only to that record year. Meat consumption for 1957 is expected to fall below last year's record 164.7 pounds.

- The seven-year expansion in the number of cattle on U. S. farms has ended. The 95.2 million head reported January 1, 1957 was 1.6 million fewer than the all-time high of the year before.

"The Livestock and Meat Situation" forecasts less improvement in cattle prices for 1957. The high number of cattle on feed and forced marketings because of the drought were the main reasons for this prediction.

A chart giving sheep and lamb price averages for the past 21 years follows.

Year	Lambs		Slaughter ewes, Good and Choice, Chicago
	Slaughter Choice and Prime, Chicago ¹	Feeding, Good and Choice, Omaha ²	
	Dol.	Dol.	Dol.
1936	9.86	8.22	4.20
1937	10.59	9.10	4.68
1938	8.39	7.39	3.82
1939	9.26	8.21	4.03
1940	9.65	8.53	4.18
1941	11.19	10.27	5.43
1942	13.81	12.02	6.60
1943	14.95	13.22	7.44
1944	15.22	12.70	6.89
1945	15.48	14.17	7.69
1946	18.65	16.46	8.25
1947	23.59	20.76	9.17
1948	25.96	22.36	11.59
1949	25.45	23.06	10.83
1950	27.30	27.52	12.67
1951	34.29	31.90	17.58
1952	27.23	22.15	10.51
1953	22.96	18.36	7.22
1954	22.08	19.06	6.35
1955	21.35	18.88	6.04
1956	21.76	18.40	5.77

¹Average of prices by months for market April, 1957

UTAH STATE RAM SALE, SALT LAKE SALE MERGE

Management of the Utah State Ram Sale (Spanish Fork, Utah) and the Salt Lake Ram Sale have consolidated efforts for 1957 sale plans. The Salt Lake sale held the forepart of September, will be discontinued, and the Utah Ram Sale, which has usually been a one-day event the forepart of October will be held two days, October 11 and 12 at Spanish Fork.

Mark Bradford of Spanish Fork will serve as president of the sale.

classes as reported in each month. Beginning 1932 reported classes change seasonally, comprising shorn lambs in about May, spring lambs in about June-September, and woolled lambs in all other months.

²Average prices for the months available. In some years, no prices are quoted for one to three months of few feeder shipments.

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**GREETINGS AND GOOD WISHES
TO THE NATIONAL WOOL GROWERS**

Wherever you see wool, you will see—

**BLACK STRIPE WOOL BAGS
AND
BLACK STRIPE PAPER FLEECE TWINE**

THE STANDARD FOR YEARS—ASK YOUR DEALER

BLACK STRIPE

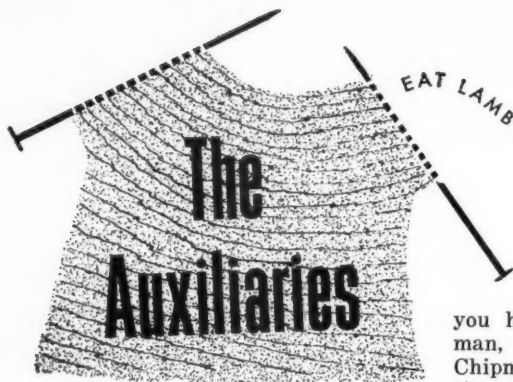
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Your Auxiliary President Reports

St. Onge, S. Dakota
March 11, 1957

Dear Ladies of the Sheep Empire:

As I write this message to you the snow is falling fast. We do not regret this as the moisture is needed badly in this area. My treasured feathered friends are hovering around a bird feeder just outside the window, trying to satisfy their appetites. The signs of spring are far removed by the weather man but by the calendar it is just around the corner.

With the thought of spring comes the desire for a new all-wool frock for the Easter parade. The dress, coat or suit you purchase or sew yourself will have that eye-appealing "dressed-up" look if the fabric is wool. Wool is a happy fabric that has the most fashionable colors and greatest number of weaves. It is a fabric that can go any place at any time with the wearer perfectly aware that she or he is dressed in high fashion.

How many housewives are pondering over the Easter menu? Stop right now; order that delicious leg of lamb, roast it to suit your family's taste, garnish it with mint-meringue peach halves and you have a meat dish your guests and family will relish. Lamb is delicious, nutritious and economical. Serve lamb often.

Mrs. Delbert Chipman, National Lamb Chairman, American Fork, Utah would like to have a lamb chairman in every State to carry on the program on a State level. State Presidents, when

you have appointed your lamb chairman, please send her name to Mrs. Chipman. She has a wealth of promotion material to be put to work over the Nation immediately. Our people will be made conscious of the value of lamb by constantly promoting its usefulness in the diet the same as Make It Yourself With Wool has brought wool to the front. Ask your grocers and butchers for lamb every time you buy meat. Soon it will be on every meat counter over the country.

Every State will be making plans to have their governors proclaim weeks for both LAMB and WOOL. These proclamations and pictures coming from the States in all of the newspapers make very good publicity. Your governor will be able to help you get the lamb proclamation and picture in the U. P. and A. P. newspapers. The Wool Bureau, with Miss Mary North, handles the publication of the wool proclamations for you, upon receiving them for the States.

We do not advertise enough the products we have for the buying public. I believe we must keep LAMB and WOOL before the public at all times. If you

are a sheep or goat producer or handle the animals or products, never stop advertising your wares if you want people to buy them. Look what the wool sewing contest has done for the use and sale of wool fabric! The public has become aware of the value of wool not only for wearing apparel but for upholstering furniture and automobiles. "Texas has made great strides ahead toward changing the car upholstery to 100 percent wool," states Mrs. Adolf Stieler, Texas auxiliary president. The ladies in her State will not have a car unless it has all-wool upholstery. Let's all adopt that plan and demand that the next automobile we buy must have all wool upholstery.

At a recent meeting of the South Dakota Wool Growers in Belle Fourche, Mr. Leonard Nadasdy, wool public relations man from Minneapolis, told the ladies of the enthusiasm in that State over the Make It Yourself With Wool contest. The homemakers, ladies over 22 years of age, also conducted a wool sewing contest of their own which proved to be very popular. This was on a State level and prizes were awarded. Minnesota will be in the National Contest this year for the first time. We are happy to welcome you to the National Make It Yourself With Wool contest in Salt Lake City in January, 1958.

I wish to express my thanks to all of the fine folks in the sheep growing empire for their expressions of congratulations and best wishes sent to me since I became president of your fine organization. It is your loyal cooperation that gives me the security I need to do my job well. I appreciate this very much.

Each one of the States have new and unique ways of carrying on the work of their auxiliary. If you would like to share them with us, send your story to Mrs. Floyd Fox, National Press Correspondent, Route 3, Box 56, Silverton, Oregon by the 15th of any month. Your neighbors and friends in all of the States will enjoy reading about your activities.

Soon you will be receiving the Lamb-Wool stickers from Mrs. O. T. Evans for distribution in your State. Do not pigeonhole these but place one on each

State Presidents Listed

Colorado—Mrs. Alex Benzel, Box 177, Glenwood Springs
Idaho—Mrs. Martin E. Curran, Hagerman
Missouri—Mrs. Glen Armentrout, Norborne
Montana—Mrs. Charles Eidel, 2612 2nd Avenue South, Great Falls
Nevada—Mrs. Stanley Ellison, Tuscarora
New Mexico—Mrs. C. F. McWilliams, Box 871, Carlsbad
Oregon—Mrs. Alvin Hartley, Star Route Box 6, Silverton
South Dakota—Mrs. Leroy Clarkson, Belle Fourche
Texas—Mrs. Adolf Stieler, Comfort
Utah—Mrs. Parson U. Webster, Cedar City
Washington—Mrs. Parm Dickson, Box 709, Okanogan
Wisconsin—Mrs. Paul L. Cooper, Rt. 2 Box 174, Ridge Road, Waukesha
Wyoming—Mrs. R. I. Port, Sundance

piece of outgoing mail and be sure to send your contribution for them to the chairman.

Pendleton Woolen Mills, 218 S. W. Jefferson Street, Portland, Oregon, is again offering for sale the wool skirt lengths to the States for prizes. They would appreciate receiving the orders as soon as possible. It takes them a long time to prepare them—and I know you will be expecting delivery by late summer.

State Contest Directors, have you sent the final listing of your Make It Yourself With Wool entrants to the Wool Bureau and to the American Sheep Producers Council? These lists are necessary to complete the business of both organizations. As of a recent letter from the Wool Bureau, they remind me that only 25 percent of the lists are in.

As of today, March 18th, I received a notice to go to New York next Monday. I will have much information for you in my next message from the Wool Bureau.

Happy Easter Greetings to all of you.
Most cordially yours,
—Mrs. Rudy (Mabel) Mick
National Woman's Auxiliary
President

STATE REPORTS

WASHINGTON

MRS. Parm Dickson, Okanogan, Washington, State president of the Washington Wool Growers Auxiliary, called an executive meeting on February 12, to formulate plans for the State Make It Yourself With Wool contest. Mrs. J. W. Mearns, Yakima, is the State contest director and is working with the district chairmen getting out the material to prospective contestants.

Mrs. Dickson's supporting officers are: Mrs. Ed Suksdorf, Goldendale, first vice president; Mrs. D. F. Lange, Palouse, second vice president; Mrs. Phil Kern, Ellensburg, secretary; Mrs. Al Egley, Yakima, treasurer; Mrs. Russell Brown, Vantage, corresponding secretary; Mrs. J. W. Mearns, Yakima, State contest director, and Mrs. S. A. Fernandez, reporter.

OREGON

MRS. Alvin Hartley, Silverton, State president, Oregon Wool Growers Auxiliary, and Mrs. Floyd T. Fox, Past President, met with the Executive Council of the State wool growers at Prineville, Oregon on March 9. Mrs. Hartley reported that the money received from the National Auxiliary as their allotment from the promotion fund was received for the Make It Yourself With Wool contest, but they would still have to raise the money for carrying on the

vast promotion work on lamb and wool in 4-H projects. The executive committee pledged complete support and ordered rams to be purchased by their association and auctioned at the State Ram Sales, to meet the financial needs of the Auxiliary.

Mrs. Hartley's supporting officers are: Mrs. Gaylord Madison, Echo, first vice president; Mrs. Marion Krebs, Eugene, second vice president and Make It Yourself With Wool contest director; Miss Merle Bowen, Silverton, secretary; Mrs. William Hoover Steiwer, Jr., reporter.

SOUTH DAKOTA

THE Women's Auxiliary of the South Dakota Sheep Growers Association has two major projects, namely the Make It Yourself With Wool contest and the lamb promotion program. The first phase of the lamb program is to bring to the public the importance of lamb in their diet, and how to use it economically and tastily.

Through the efforts of the Auxiliary, under the direction of State Lamb Promotion Chairman, Mrs. E. E. Karinen, Fruitdale, a proclamation was issued by Governor Joe Foss proclaiming October, 1956 as "Eat More Lamb" Month.

Retail meat dealers in Belle Fourche were contacted and they agreed to push the sale of lamb. The program went over so well that two of the dealers now stock lamb all of the time. Recipe booklets were given out by the dealers, and many clubs and interested groups also received these booklets on lamb. Restaurants in Belle Fourche also featured lamb and now have it on their menus daily.

Two lamb demonstrations were presented to the public through the cooperation of the Auxiliary and Montana-Dakota Utilities demonstrators. At a drawing, prizes of cooked lamb were awarded.

Mrs. Karinen was a guest speaker at "Sheep Day" at the Sioux Empire Farm Show held at Sioux Falls, January 29, 1957. She appointed Mrs. George Olson of Volga, South Dakota, to act as lamb promotion chairman for the Sioux Falls District.

Industrial and farm groups were contacted and recipe books and posters were distributed at the sheep auction booths.

Mrs. Karinen spoke over the radio at Sioux Falls, explaining our program on lamb promotion.

Plans are underway to appoint a lamb promotion chairman in each of the 11 districts of the Make It Yourself With Wool contest, to carry on a program similar to the one launched in Belle Fourche.

We aim to make the public "LAMB CONSCIOUS."

1957 SEWING CONTEST

Awards Announced

OPENING of the eleventh annual "Make It Yourself with Wool" contest in 18 Western States, was recently announced by Mrs. Rudie Mick, president of the National Wool Growers Auxiliary.

With the addition of Minnesota this year, the contest now is held in well over half the area of the United States, and the number of entrants runs into the thousands, Mrs. Mick said.

Open to girls between the ages of 14 and 22, the annual sewing event is sponsored by the Nation's wool growers through the National Wool Growers Auxiliary, the State wool growing organizations, and the Wool Bureau.

"We believe that we are serving the young people of the Nation by stimulating their interest in the art of home sewing," Mrs. Mick said. "The wool growers of the Nation seek to foster interest in this skill," she continued, "to help young people realize the sense of achievement obtained by using this art. The contest gives impetus to the natural urge of each youngster to create."

Top Awards Are European Trips

Top national awards are two-week expense-paid tours of Europe's fashion centers via Pan American World Airways. Other prizes include scholarships, U. S. savings bonds, Singer sewing machines, fabric lengths, and many more valuable awards.

In addition to State and national awards, there are many district prizes awarded in the preliminary finals to be held in each district in the early fall. Winners in State finals to be held later in the fall receive trips to Salt Lake City, where national competition will be held. Trip expenses are presented by the F. W. Woolworth Company.

Awards Made by Leading Firms

Among the companies which present a total of over \$45,000 in awards are: Coats and Clark, Inc.; Colorado Woman's College; John Dritz & Sons; McCall's Patterns; Singer Sewing Machine Company; Simplicity Patterns, and Woolite.

Mills contributing to the awards are: Forstmann Woolen Company; Pendleton Woolen Mills; Sag-no-mor Jersey by Wyner; Standard Felt Company; Strathmore Mills and S. Stroock & Company.

Sub-Deb Division Is Enlarged

Contestants compete in one of three divisions: junior, for girls between the ages of 14 and 17; senior, for girls between the ages of 18 and 22, and sub-

deb, for girls between the ages of 13 and 15. The sub-deb division this year includes awards for all-wool jumpers or skirt-and-vest combinations as well as skirts. It is designed to interest the younger girl in sewing and help prepare her for participation in the larger competition, which includes dresses, suits,

coats or ensembles of virgin wool fabric.

Participating States are: Arizona, California, Colorado, Idaho, Iowa, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Ohio, Oregon, South Dakota, Utah, Washington and Wyoming.

Auxiliary Lamb Promotion Schedule Well Organized

by ORA H. CHIPMAN
Lamb promotion chairman, Women's
Auxiliary to the National Wool
Growers Association.

Speech delivered before Auxiliary meeting at Las Vegas, Nevada, convention in January.

ALL States are not organized with a lamb promotion chairman. I would like to suggest that each of you get a lamb committee organized. Some of you say that your men handle this part of the program and you have as your main objective "Make It Yourself With Wool." That is a big job and an important one. My interests are in that also, but so much can also be accomplished by you women on lamb promotion also, that I most sincerely hope you can join hands with the men's organization and express your willingness to assist. I'm sure the men would welcome your help and suggestions.

Sometimes we find our best suggestions come from non-wool growers who see us from different viewpoints. I found this true a year or so ago when I attended by invitation a luncheon of business men who represented buyers, hotel chefs, restaurant supervisors, chain stores, school lunch supervisors, etc. There I listened with embarrassment to the plain spoken guests who informed us of their thinking as to why lamb wasn't on top of the list as the most popular meat. I will give you a few of their criticisms:

1. We do nothing about advertising except for a few days before our lamb season. They acknowledged that we really get active at this time but the spurt discontinues as soon as our individual lambs are marketed.

2. Lamb is not available all year.

3. The public is not aware that there are other delicious cuts of lamb—other than legs and chops.

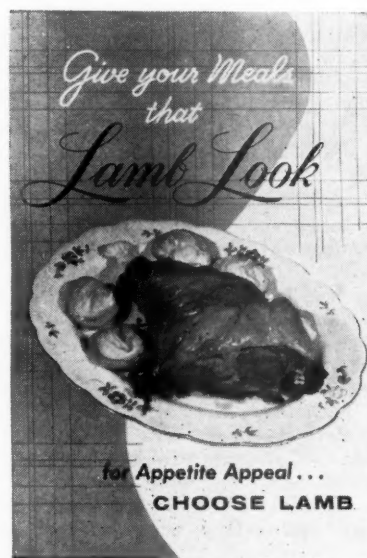
4. A continuous year-around educational program is necessary.

They pledge their support in every way possible.

This was indeed a challenge to us. We accepted it and immediately set to work to improve our situation. First of

all, with the aid of agriculture commissioners, national and State wool growers, chain store supervisors, etc., we worked out a yearly program. A copy of this program has been sent to each State and is as follows:

September, October, November — Western sheep are on the market. During the heavy marketing of each State, there should be a lamb month declared by each governor. Each should be presented with lamb. Each mayor should declare a lamb day in his respective community. At this time lamb should be available in every meat market—with plenty of charts, cookbooks, etc., available. During November lamb should be featured on the Thanksgiving table.



THIS FULL COLOR POSTER, advising homemakers to give their meals that Lamb Look, was developed recently by the National Live Stock and Meat Board. The poster focuses attention on the appetite of piping hot leg of lamb, cooked to just the right degree of doneness. The lamb is colorfully garnished with mint-meringue peaches and parsley. The background of the poster is rose and white. The poster is 20½ by 30½ inches in size and may be purchased in quantity. There is a charge of \$12.00 per hundred to cover the cost of production. Additional information may be obtained from the National Live Stock and Meat Board, 407 South Dearborn, Chicago 5, Illinois.

December, January, February—Feeders are going on market. Lamb should be advertised and featured for the Christmas and New Year's dinners.

March, April, May—Ham has taken over the Easter dinner table. Let's get LAMB instead of ham. During these three months especially stress lamb in the baby's diet. Gerbers and Heinz will cooperate with you in this. Our slogan: IF YOU WOULD HAVE YOUR TODDLER BRIGHT AND GAY, PUT LAMB IN HIS DIET EVERY DAY.

This can be made one of our strongest promotion projects. We can get a statement from eminent pediatricians to recommend lamb in the baby's diet. With pictures and posters we can do much to move the canned lamb. We can distribute some special menus and recipes for ground lamb for the baby at this time also.

Lamb should be emphasized for Mother's Day.

June, July August—Shed lambs available. Barbecued and grilled lamb should be featured. Especially nice for patio dinners, canyon and park picnics, community and church outdoor parties, etc. Instead of hamburgers—use lamb-burger and chops, or whole leg of lamb. It's delicious!

During each month publicity can be stressed through posters, radio, television, newspapers, etc., for each occasion. During every month of the year there are some campaigns which we suggest emphasizing.

(Mrs. Chipman's report of her work for more lamb in the school lunch program is not included here, as the complete story was printed in the November (1956) issue of the NATIONAL WOOL GROWER.)

To my knowledge this school lunch program is the most important step towards lamb consumption which has ever been carried out. Our theory is: That if children in the primary and grammar grades and high school develop a liking for lamb when they are young, they most certainly will be our future supporters—and what a world of supporters we will have.

I emphasize that each of you State leaders make lamb on the school lunch program your immediate concern. I will furnish you with the name and address of your State supervisor if you are not already familiar with them.

Other recommendations for lamb promotion are as follows:

No. 1. Secure a nationally known doctor's recommendation for the value of lamb for reducing in all ages; for teenagers, for convalescents.

Secure a statement from a movie star or a nationally known baseball player on the value of lamb in their diet.

We have seen in the past that turkey has been served in the White House

with a great deal of publicity—why not lamb?

No. 2. Make a check of all State institutions such as prisons, industrial schools, training schools, mental institutions, and encourage the use of lamb at least twice a week. Our money helps to maintain them—why isn't our product being used more extensively? We found one institution in Utah that has never served lamb but we have a pledge that they will do so in the future. Furnish these institutions with our recipes for cheaper cuts of lamb.

No. 3. Visit Home Economic Departments in colleges and high schools and give the instructors some helpful materials. Furnish them with our recipe books, charts, etc.

Near graduation time at colleges, secure names of graduates in home economic departments and send each a letter congratulating them on choosing home economics as their profession and remind them of the necessity of our industry in the comfort and happiness of everyone. Present each with an attractive, especially designed kit containing our lamb cookbooks, charts, and all available materials on wool and lamb that would be helpful to them in their teaching program. Let's furnish them with the appropriate tools. Put lamb in the Home Economic Magazine.

No. 4. Hotels and restaurants should be encouraged through their State organizations to use more lamb on their menus. We should sponsor a lamb cooking school in each State for chefs of hotels and restaurants.

No. 5. The school lunch supervisor in each State should be contacted in regard to lamb on the school lunch menu. Furnish them with our cookbook and special lamb recipes on stews, chili beans, hamburgers, etc., suitable to their needs and financing. They use the cheaper cuts which are suitable for stews and potted lamb. Utah has 365 kitchens where lamb recipes of Chef Girard from Hotel Utah are being used.

No. 6. A lamb cooking demonstration should be given in each State allowing ample time for advertising.

Any organization is strengthened by activity. The "Make It Yourself With Wool" project has strengthened the State and National Auxiliary in many ways. New interest has been created by participation in this project and many new members added to our rolls. Through this means Auxiliary work becomes attractive. Let us aim to enroll all wives of wool growers through participation in lamb and wool promotion projects. We recognize that it is the women in the homes who do the buying and it is our responsibility to share in an educational program to educate them in a wider use of lamb in the family

(Continued on page 42.)

Lamb Dish of the Month



From the kitchens of the American Sheep Producers Council

LAMB CHOPLETS COMBINE THE VIRTUES OF RIBLETS CUT FROM INEXPENSIVE LAMB BREAST with ground lamb, giving a reasonable facsimile of the favorite lamb chop at a most modest price.

This is a do-it-yourself creation that calls for lamb riblets—1 inch thick strips of lean streaked with fat, attached to a rib bone. Your meat man makes these for you by cutting between the ribs in a breast of lamb. You'll need also some lean ground lamb.

To make the Lamb Choplets: With a sharp knife make a slash along the bone starting just above one end of the bone and extending about two-thirds the length of the riblet. Into this slash stuff ground lamb, patting it flat so that it resembles a rib chop. Better allow two to a person.

To cook the Lamb Choplets: Place choplets on broiling rack located so that surface of chop is about 3 inches from source of heat. Allow about 10 minutes for broiling time on each side. Turn choplets with tongs or cake turner. Sprinkle with salt and pepper, a dash of thyme or garlic salt if you like. Continue broiling. Serve on very hot platter and on hot plates. Or keep hot on food warmer tray.

To serve with Lamb Choplets: For leisurely Sunday breakfast or brunch, serve with mint or currant jelly sauce, creamed potatoes and peas, and a favorite hot yeast bread. For a last min-

ute dinner on a broiler, on the broiler pan along with the choplets cook potato-cheese sandwiches (slices of cooked potatoes put together with a slice of cheese, sandwich style, and brushed with butter), tomato halves or, after turning the choplets and potatoes, fruit such as canned peaches, pears, or pineapple slices brushed with butter and garnished, after cooking, with currant or mint jelly.

To make Jelly Sauce for Lamb Choplets: Melt over low heat 1 cup mint or currant jelly, whipping it until smooth. If using currant jelly, stir in 1 teaspoon prepared mustard. Serve hot, to pour over choplets.

When broiling two or three lamb choplets or chops, use a pie pan with a cake rack or similar rack to hold the chops off the pan. This saves washing the large broiler pan. Aluminum foil spread in the bottom of the broiler pan makes it easier to wash the pan.

Lemon Butter is a good topping for Broiled Lamb Choplets or Chops. Mix together two tablespoons butter, one tablespoon lemon juice, $\frac{1}{8}$ teaspoon garlic salt, curry powder or chili powder. Spread over hot broiled chops. Sprinkle with chopped parsley or chives.

Mint Jelly is the accepted partner for lamb. But Currant Jelly is equally good, as are the wine jellies. Serve a spoonful of jelly in half a canned pear or peach, or on a slice of pineapple, orange slice or candied apple ring. It may also be served in cups of half lemon rinds.

LAMB PROMOTION

(Continued from page 41.)

diet. There is a great deal of work outlined that can be volunteer service by our Auxiliary officers and members. I am confident that State auxiliaries will welcome an opportunity of service in an all-out lamb promotion campaign of this type. We acknowledge the fact that it will be necessary to do a great deal of ground work.

I would like to acknowledge a letter from the American Sheep Producers Council, Inc. It reads in part:

"We have found that there are thousands of children everywhere in this country who have never tasted lamb simply because it is never served in their homes. . . .

"It occurs to me that it might be very worthwhile to hold kitchen parties for children. The parties would be conducted by Auxiliary women in their own communities. They would have to hold more than one in most areas in order to invite the Boy Scouts, Girl Scouts, 4-H groups, Future Homemakers of America and others.

"First, the children would watch a simple lamb dish being prepared so they could go home and prepare it for their parents. When a child learns to cook something the average parent will permit the child to try it out at home, even if that parent doesn't care about the food being prepared. After the Auxiliary member demonstrates the preparation of the dish, (say Barbecued Lamb Riblets, since they are popular with children, inexpensive and make good use of a less familiar cut) there would be games while the riblets finished cooking, after which they would be sampled. Lamburgers might also be served with a beverage.

"Since I have no figures in this office which would indicate the number of Auxiliary members by towns, it is impossible from here to determine the cost of putting a plan of this kind into operation, but I am sure from your files that you could determine the possibilities quite readily, and also let me know if you think the Auxiliary members would welcome a project of this kind. We have in mind paying for the supplies necessary for these kitchen parties for children, and making available recipes for them to take home, if the cost doesn't get out of hand."

This is a very fine idea which I think we should consider and endeavor to carry out. We need to know just what financial help is available to carry out this project. Be thinking about it and I will keep you informed of materials, etc., available.

It is the beginning of a new year. Let's cooperate to make it a banner year for promotion work. Let's be open for suggestions and get the viewpoints of many. Let's give of our knowledge, our time, our talents and all that is necessary to put lamb as No. 1 in the meat consumption list. I am confident we can do it if we will get a vision of our possibilities, go at it with a faith in ourselves and our industry, and a determination to give sufficient time and effort to accomplish our goal.



Ethel M. Niles Photo

THE GANG'S ALL HERE

Quadruplet lambs were born this spring to the ewe owned by 7-year-old Frank Schindler of Woodburn, Oregon. Frank started his flock two years ago with two ewes purchased with earnings from berry picking. Last year he earned enough to add five ewes and a Romney ram. Frank's two-year-old sister Diane assists in the bottle feeding required by the quads.

G. M. President announces further use of wool

GENERAL MOTORS CORPORATION
DETROIT, MICHIGAN

OFFICE OF THE PRESIDENT

Mr. Hugh Munro
Munro Kincaid Mottla, Inc.
Summer and Melcher Streets
Boston 10, Massachusetts

February 26, 1957

Dear Hughie:

Attached hereto I am sending a brochure presenting the Buick Roadmaster 75. I know you will be interested in this luxurious line of cars which has been added at Buick and especially because they are offering a very fine selection of broadcloth fabrics, as well as the nylon, plus giving the customers opportunity to make their own selection as between the two.

The wool fabrics which are being offered are the finest to be had and if, as you have believed for a long time, there is a real demand for wool broadcloth, we should be able to get the answer over the next few months in the selection of Buick Roadmaster 75 customers.

If you have any unsatisfied prospects for such high grade merchandise, I urge you to pursue them to the end that the Buick dealers will be able to process their orders.

I think these new interiors which Buick is offering in the Roadmaster 75 are the finest to be had, certainly nothing superior anywhere in the field I am sure you will agree when you have the opportunity of inspecting one, which I hope will be very soon.

In the meantime, kindest regards.

Sincerely,

(Signed) Harlowe H. Curtice

The National Wool Grower

this month's QUIZ



What improvements have you made in recent years in the preparation or packing of your wool for marketing? What improvements do you think the industry as a whole could make in this connection to bring better net returns to the grower?

WE have been trying to take the tags out of our wool for a number of years. I believe it would be a good thing if we could do something to improve the way we handle our wool. It is hard for anyone to do much about grading a small amount of wool. Perhaps it would be a good thing if all the growers could get their wool together to be graded. Everyone around here shears with a portable plant.

—John S. Dalton
Parowan, Utah

WE sack black wools separately. We also ask shearers to keep fleeces clean of tags and to put fewer fleeces into sacks. We keep yearling wool separate.

In general, we attempt to keep wool clean as it is shorn and sacked. Education needs to start with the shearers and their crew. They hurry to make more wages each day, and often they claim not to understand or speak English.

In our region, the wool tosser and sacker are with the shearing crew and work for the shearers and only indirectly are accountable to the grower. It seems that one could not find skilled help—or help of any kind—to grade and separate the wool as it is shorn—too few men—too much haste.

—G. E. Barker
Casper, Wyoming

I shear my black sheep last. I also shear my bucks and yearlings separately and sack the wool that way.

—Harold E. Davis
Vernal, Utah

OURS is a farm flock, and as such we have all types and grades of wool from Cotswolds on up to Rambouillets.

We always try to keep our wool as clean as possible and free from burrs and other foreign material. I believe if a farm flock is one specific breed, and the ewes are bred to a ram of the same wool type, it will make for better re-

turns to the grower on his wool crop.

Our wool goes to the Pacific Wool Growers and we have eight or 10 grades from our small flock.

—Harold McConnell
Freewater, Oregon

IN an effort to improve the preparation of our wool we remove all heavy tags before tying the fleece. We also shear and sack black wool separately.

—Bauman Brothers
Carpenter, Wyoming

MOST of the wool produced in Texas is sold on an ungraded or "original" bag basis at an average price which pays relatively more for low grades and less for high grades than they would bring if sold on a graded basis.

With comparable characteristics, Texas wool sells for approximately 10 percent less in the domestic market than foreign wool, mainly because of being ungraded and poorly prepared.

An analysis of the clips of 42 growers in Sutton County in 1952 showed that wool quality increases with the size of clips. However, the small producer who improves the quality of his sheep and prepares his fleeces properly can market just as high-quality wool as the grower of a large clip. This is an excellent way for the small producer to increase his income without increasing the size of his operation.

A direct correlation was found between length of staple and clean content in scouring tests made on 49 bags of graded and ungraded wool. Fine staple yielded 2 percent more clean wool than the average of the lot, while fine French combing, fine clothing and "original bag" yielded 2.3, 7.4 and .2 percent, respectively, less than the average of the total.

The "quality index" is an objective method used to measure the progress of sheep improvement and wool preparation programs. Using this method, the 1954 wool clips of 61 producers showed an

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SHOW AND SALE — SEPTEMBER 25-26
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increase in quality of 1.66 points over the 1948 wool clips of approximately the same producers. This meant a price increase of .94 cent per pound over the price they would have received had their quality remained at the 1948 level.

The records of 75 producers whose wool was graded at the shearing pen in 1950 show that the 28 producers who selected their sheep on a staple length basis received 5.8 cents more per pound than the 47 producers who did not follow this practice. The benefits derived from this practice were about 50 cents per head, which more than paid all shearing costs, including bags, twine and extra labor.

Comparative prices of graded and ungraded wool for 1948, 1952 and 1953 show that the grower who sold on a graded basis received 25 to 50 cents more per fleece for his wool than the grower who sold on an ungraded basis. This is an increase of \$30,000 to \$60,000 per million pounds of wool.

—Texas Agricultural
Experiment Station—
Bulletin 823

A good job of wool marketing will pay off for producers in two ways . . . more money at once from the sale of wool and more money later from a higher payment under the wool incentive program, reminds the U. S. Department of Agriculture.

Under the method used to determine shorn wool payments, the individual producer's payment goes higher as the money he receives from the sale of his wool gets larger. This results from making payments on a percentage basis to encourage better preparation and marketing to get the best price possible.

One measure of the job U. S. pro-

ducers do in marketing their wool is the relationship of price in this country to prices of wool in foreign markets. While prices in Boston are 15 to 30 cents per pound, clean basis, over prices a year ago, Boston wool prices continue unusually low in relation to world prices. Furthermore, prices at which producers are reported to be selling their 1957 clips are low in relation to Boston wool prices.

Part of the apparent lax job of selling and the resulting gap between domestic prices and world prices may be due to a misconception of how payments are figured under the wool program. Some producers may still think that the incentive payment will make up any difference between the price they get for their wool and the 62-cent incentive level. Actually, the producer who sells his wool at a low price gets a smaller incentive payment and the producer who sells for the highest price also gets the largest.

—USDA

WE keep the shearing floor clean to tie fleeces on. We put tags in a pile and bag them separately. We started going to the Wyoming Wool Marketing Association several years ago and believe they do a better job of selling.

—Tedmon Livestock
Fort Collins, Colorado

I have tried to put clips into bags as free of straw, dirt and manure as possible under our conditions.

If growers would make it possible to see each clip before it is tied, removing all foreign material, and using care to keep all clips dry until delivery, it would be the most important improvement we could institute. I believe the various wool pools should gradually educate the growers on how to accomplish this by education, and then by making it mandatory.

—James G. Wagner
Plentywood, Montana

WOOL MARKET

(Continued from page 35.)

wool had been contracted there, the top price being 66 cents a pound. Also some 2,600 fleeces were sold at \$1.48, clean basis. Farm flocks and some shed-lamb range bands were reported as being sheared prior to lambing.

TEXAS:

At a sealed bid sale in San Angelo about 40,000 pounds of clippings were sold from 32½ to 32⅝ cents. Some 8-months' wool was contracted at an estimated clean price of \$1.50, landed Boston. Odd lots of fine wools were contracted in the Lampassas section, with no price stated. On the whole there has been little activity in Texas.

TROUBLED?

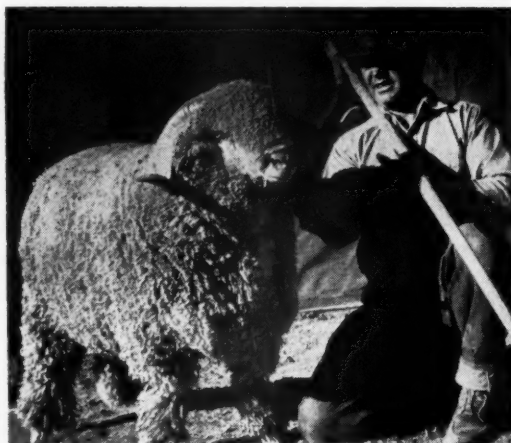
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Stoddart & Smith's RANGE MANAGEMENT	7.50
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For Sale by NATIONAL WOOL GROWER

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Salt Lake City 1, Utah



Miles Pierce, Alpine, Texas, shows his prize-winning Rambouillet ewe.

San Angelo Stock Show

THE adult Rambouillet sheep division of the San Angelo, Texas, Fat Stock Show was won by Miles Pierce of Alpine, Texas. He showed the champion and reserve champion ram and the champion ewe at the mid-March show.

Connie Locklin of Sonora, Texas, showed the reserve champion ewe.

Pierce's champion ram, Uno Chance, was also champion at Texas shows in Houston and San Antonio and reserve at El Paso and Fort Worth. His reserve ram was Know Chance and his champion ewe King Altuda 4th-A506.

San Antonio Exposition

PIERCE Rambouillets also won most of the top honors at the San Antonio Livestock Exposition in February. He showed the top rams and the top ewe at the San Antonio show.

The champion and reserve champion Columbia rams at San Antonio were shown by L. A. Nordan of Boerne, Texas, as was the champion Columbia ewe.

T. R. Hinton, Keller, Texas, had the champion Suffolk ram at San Antonio. Harrison Davis of Dorchester, Texas, brought the champion Suffolk ewe.

In the Hampshire show, Mrs. Ammie E. Wilson of Plano, Texas, captured the champion ram award, while Armentrout and Donley showed the top Hampshire ewe.

Champion fine wool lamb of the show award went to Darrell Smith of Crane, Texas. Champion fine-wool crossbred lamb was shown by Gary Real of Kerrville, Texas. Ted Luce of Del Rio, Texas, had the champion crossbred lamb of the show, and James Covill of Crane showed the champion fat wether lamb in the Southdown, Shropshire or Cheviot division.

They Sport the "New Look"

Wyoming Researchers Test Sheep Coats

FASHION isn't the reason for the "new look" which about 400 head of Wyoming sheep are sporting this year—it's research.

Wyoming wool experimenters are giving sheep coats to wear over their natural woolen ones—coats which may prove valuable for protecting sheep and improving wool.

In 1941, Wyoming researchers making similar tests learned enough from coating sheep to encourage them to start up experiments again in 1956. The major difficulty in the earlier tests was that the fabrics tested were not durable enough to withstand much wear and tear.

Modern plastics, discovered during and since the war, however, have renewed possibilities. These new materials are lighter-weight, snag-resistant, durable, and have good draping qualities.

Researchers are testing three different types of fabrics given by industry for the experiments. Burlington Mills

donated a plastic coated burlap called "Burtex." U. S. Rubber Co. contributed "Fiberthin," a plastic type of raincoating, and Hohokus Bleachery Co. gave a resin-treated cotton.

Last October Otto Lembcke, Laramie, coated part of his flock. His sheep are herded and allowed to run in fenced pastures. A month later Gaston Carriaburu, Rock Springs, put coats on some of his sheep before wintering them in the Red Desert area.

At shearing time, wool researchers will remove all the coats, or rugs as they are sometimes called, and score them on durability or wear resistance.

In addition they will collect information on the weight of clean wool, dirt penetration, and length of staple from equal numbers of coated and uncoated sheep. In the 1941 experiments, dirt penetration was much less and the staple longer in the coated sheep than in those without coats. The differences in clean wool weight and body weight were slight.



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MOSCOW, IDAHO



Around the Range Country

AROUND THE RANGE COUNTRY GIVES OUR READERS A CHANCE TO EXPRESS THEIR OPINIONS ABOUT ANYTHING PERTAINING TO THE INDUSTRY OR ABOUT LIFE IN GENERAL. IN OFFERING THIS SPACE FOR FREE EXPRESSION OF THOUGHT, THE NATIONAL WOOL GROWER ASSUMES NO RESPONSIBILITY FOR ANY STATEMENT MADE. THE STATEMENTS ABOUT RANGE PASTURE CONDITIONS ARE TAKEN FROM THE U. S. WEATHER BUREAU REPORT FOR THE WEEK ENDING MARCH 18, 1957.

PASTURES

As a result of the recent moderate to heavy rains in the Pacific coastal region, pasture and range grasses are now making very good growth. Ranges are slowly improving in Arizona, but more moisture is needed, particularly in the extreme south-eastern portion. Supplemental feeding is still necessary to maintain livestock in good condition in New Mexico and western Texas, where warmer weather and more moisture are needed to accelerate growth of pasture grasses. Showers during the week further improved grazing areas in the eastern half of Texas, and livestock are gaining weight rapidly on clover, fescue grass, and small grains. Pastures are greening and providing a little grazing in Oklahoma and Kansas, and soil moisture is now generally sufficient to start growth of grass in south-central and eastern Nebraska, but more moisture is needed to produce good pastures in the Dakotas. In Montana most ranges are closed to grazing in areas west of the Continental Divide and in the south-central portion; feeding of roughage, grain, and concentrates, however, is still about normal or only slightly above normal.

Soil moisture is now generally sufficient to promote good growth of grass in the South and Southeast. Pastures are improving rapidly and are in mostly good condition in all areas from the lower Mississippi Valley to the Atlantic coast, except in northern and northwestern Florida where deteriorated by the recent dry, cold weather.

COLORADO

Fort Collins, Larimer County

March 19, 1957

A Texas outfit purchased a lot of face and tag wools here at 30 cents. There were two carloads of this wool from feedlot lambs. Most shearing will be done here in April and May at 40 cents per head.

We operate on irrigated pastures, and they are just starting to grow. Hay prices are \$20 per ton loose and \$25 to \$30 per ton baled, about the same as a year ago.

Lambing began here on January 15. Approximately a 140 percent lamb crop was dropped. We had all types of weather during lambing—everything from a blizzard to banana belt weather. Lambing help is almost non-existent in this area. All the help know around here is tractors and sugar beets.

You are doing a fine job. It is always very disappointing to know and see op-

erators who don't have enough interest in their business to belong to the one organization that does more for them than all the rest—the National Wool Growers Association. Last week I spent some time with an operator who is sure that the incentive payment is the same for every clip no matter what it brings. I could not convince him otherwise.

—Allyn H. Tedmon, Jr.

Grand Junction, Mesa County

March 21, 1957

Sheep have wintered fairly well here. We haven't had any feed, but prospects look good. Baled alfalfa hay is selling at \$30 per ton—\$12 per ton higher than a year ago.

Fine-wooled whiteface crossbred yearling ewes have sold here at from \$22.50 to \$25.

Shearing will be done from April 1 to 20. Shearers will receive 40 cents per head without board, the same as last year. Some wools in the higher country—Montrose, Delta and Hotchkiss area—have sold for 58 cents, 56 cents, or as low as they can steal it.

—Gus Theos

Kiowa, Elbert County

March 15, 1957

Sheep have wintered well here, despite the fact that we had to use our spring range last summer because of the drought. Alfalfa hay prices have been higher than a year ago. Baled hay is selling at \$30 to \$33 per ton.

Lambing has started here. The number of lambs saved per 100 ewes is as good or better than last year. We had some cold and some fair weather for lambing.

When shearing begins, we will have to pay shearers 45 cents per head with board.

—J. Edward Taylor

Meeker, Rio Blanco County

March 16, 1957

Some half blood, three-eighths and medium-fine wool has been contracted here at 55 cents. Shearing will begin on April 10. The contract rate for

shearers is 40 cents per head, the same as a year ago. This price includes shearing, tying and tramping.

Feed on the spring range is very poor. Sheep here have wintered fairly well. Hay prices are higher than a year ago—\$30 per ton loose and \$35 per ton baled.

—Tom Theos

MONTANA

Columbus, Stillwater County
February 24, 1957

Coyotes are not numerous here, but one coyote has killed seven ewes.

Weather has been ideal, except for a few cold days. We have been feeding ground barley as a concentrate. Baled hay is selling at \$25 per ton.

Our breeding flock is larger than it was last year.

Operating costs for 1956 were about the same as they were in 1955.

—Sam Vigg

Plentywood, Sheridan County
March 23, 1957

I lamb only about 110 ewes by myself and have just finished. Weather was better than usual for lambing. I have a good shed, and ewes are enclosed during the night.

Weather has been favorable, but no feed is available. Range feed is below normal for this time of year. My sheep do not range between January 1 and April 15. Alfalfa hay is selling at \$20 per ton loose and \$25 per ton baled.

Most shearing is done here beginning June 15.

—James G. Wagner

NEBRASKA

Chadron, Dawes County
March 19, 1957

Lambing has started here, and it has been cold and dry. About the same percentage of lambs are being saved as a year ago.

Feed on the spring range is short, though soil moisture is now about average. Alfalfa hay prices: \$18 per ton loose and \$22 per ton baled—about the same as a year ago.

Recently sales of both fine-wooled and whitefaced crossbred yearling ewes have been made here at \$21 per head.

Some shearing has been done in this area. Shearers are receiving the same as they did last year, 42 cents per head with board.

—Dale H. Witte

NEW MEXICO

Tucumcari, Quay County
March 20, 1957

Lambing has begun here and the weather is very good. We lamb on pastures and don't need any help.

Range conditions are good now—better than last year.

Some fine-wooled yearling ewes have sold here recently at \$23.

Shearing will begin in May.

—Blevans McKensie

OREGON

Freewater, Umatilla County
March 18, 1957

Spring feed conditions are about the same as they were during the past two or three years. It has been cold here, and feed is short. Sheep have wintered well.

Hay prices are lower than last year. Loose alfalfa is selling at \$15 per ton and baled hay is \$20 per ton.

Lambing has begun, and we have saved about a 130 percent crop—the same as last year. It has been cold and stormy for lambing.

Shearing is done here from March 20 to April 15. Farm flock shearing costs more—50 cents per head—because

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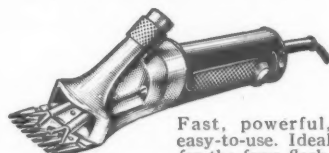
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flocks are smaller. I have not heard what shearing will cost for range flocks.

—Harold McConnell

UTAH

La Sal, San Juan County
March 14, 1957

We are having a very nice winter as far as livestock are concerned. While we have fed supplements rather heavily, I don't think I have ever known of the sheep being in better condition. At least we have never had fewer thin and draggy sheep. Prospects for feed this spring are better than they have been for the past three years.

—Charles Redd

Parowan, Iron County
March 13, 1957

Everyone in this area is feeding grain pellets. The report is that sheep have wintered fairly well. We have been feeding one-half pound of barley since the first of February. Prior to that time we fed our small flock of registered Rambouillets one-fourth pound of whole barley, beginning November 1.

We must have had some poor vaccine here. Just about all of our lambs got soremouth. They were vaccinated on November 1.

A few small clips have been contracted here at 45 cents to local buyers. Shearing will start on the 20th of this month. Shearers will receive 35 cents per head with board. The contract rate for shearing is 50 cents per head. This price includes wrangling, tying and sacking.

Hay prices have been about the same as a year ago—\$26 per ton for loose alfalfa and \$30 per ton baled.

Lambing starts here on the 25th.

I enjoy reading the NATIONAL WOOL GROWER very much.

—John S. Dalton

Vernal, Uintah County
March 13, 1957

Some wool has been sold here for 50 to 53 cents. Some wool has been sold at \$1.45 on a clean, core-tested basis. Shearing will start about April 10. Shearers will receive 40 cents per head without board. All labor goes with the contract price.

Weather has been good here, but there is very little winter range. About 14 inches of snow went into the ground this winter. I have fed hay and grain all winter, and my sheep are in good condition. Loose alfalfa hay is selling at \$20 per ton; baled hay is \$25 per ton.

Help is still a problem here.

—Harold E. Davis

WYOMING

Carpenter, Laramie County
March 16, 1957

Some light-shrinking half and three-

eighths blood lamb's wool sold here at 58 to 60 cents. No ewe's wool has been sold. Buyers do not show the interest they did a month ago, and bids are lower.

We will shear about March 25. Shearers will cost 44 cents per head, with board, as compared to 40 cents last year. This rate includes a wool tier only.

There is demand here for yearling ewes, but none are available.


There is no old feed on the range now, and new feed hasn't started yet. Range conditions are about the same as they have been for the past two or three years. With supplemental feeding, our sheep have wintered quite well. Hay prices have been higher—\$16 to \$18 per ton loose and \$20 to \$27 per ton baled.

—Bauman Brothers

Casper, Natrona County
March 14, 1957

Ranges here are bare of snow and very dry and dusty. Grass is mostly gone, but it is better than last year. Sheep are in good flesh.

Loose alfalfa hay has sold at \$25 per ton, while baled hay is \$30.



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Shearing is done here from May 25 to June 15. Some wool has contracted here at \$1.53 per pound, clean basis, f.o.b. Boston.

—G. E. Barker

Etna, Lincoln County
March 22, 1957

The Star Valley wool pool sold for 60½ cents. A total of 15,000 fleeces were sold on March 21. Shearing will begin May 10. Shearers will receive 40 cents per head with board.

Hay prices are about the same as a year ago—\$20 per ton loose and \$22 to \$25 per ton baled.

Our sheep wintered well here. We still have snow.

—Wiffin Bateman

McKinley, Converse County
March 19, 1957

Rock Springs and Rawlins, which were the driest areas of the State, have been getting some rain and snow. The country around Laramie looks better than I have seen it for a long time. They have had a lot of snow and not as much wind as in other parts of the State. Conditions there are really good. Here in our immediate area, it is still very dry.

—J. B. Wilson

WASHINGTON

Cle Elum, Kittitas County
March 21, 1957

We still have snow here. Feed on the range will begin sometime near the first of May.

Lambing is done mostly in April in this country, and shearing is done toward the end of May and the first of June.

Baled hay is selling \$12 per ton lower than a year ago—\$20 per ton.

—Ernest Berting

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COMMERCIAL	Miscellaneous
Branding Fluids	Sheepmen's Books44
William Cooper and Nephews.....29	Remedies
Camp Wagons	American Cyanamid Company..... 1
Ahlander Manufacturing Company.....43	Cooper-Tox 2
Dogs	Cutter Laboratories—K R S.....37
Friskies26	O. M. Franklin Serum Company.....28
Peterson's Stock Farm..... 5	Texas Phenothiazine Company.....45
Equipment and Supplies	Columbias
Ames, Harris, Neville Company37	SHEEP
California Stockmen's Supply..... 5	Columbia Sheep Breeders Association of America.....43
Master Coyote Control Service.....44	Hampshires
Pendleton Woolen Mills..... 5	American Hampshire Sheep Association.....48
Salt Lake Stamp Company.....43	Breeders' Directory.....3rd Cover
Sunbeam Corporation.....47	Rambouillets
Feeds	Clifford Olsen.....44
Rex Wheat Germ Oil.....46	Sales
Solar Salt.....28	California Ram Sale.....46
Marketing Agencies	National Ram Sale.....4th Cover
Armour and Company..... 6	Suffolks
	American Suffolk Sheep Society.....46

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